



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 148403

TO: Elizabeth Mulvaney  
Location: REM 10B77  
Art Unit : 1774  
March 30, 2005

Case Serial Number: 10/619642

From: Usha Shrestha  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-3519  
usha.shrestha@uspto.gov

### Search Notes



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader  
571/272-2505 REMSEN 4B28

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713  
➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

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Search requests relating to **published applications, patent families, and litigation** may be submitted by filling out this form and clicking on "Send."

For all other search requests, fill out the form, print, and submit the printed form with any attachments to the STIC facility serving your Technology Center.

SCIENTIFIC REFERENCE BR  
Tech Inf. Ctr

MAR 22 2003

## Tech Center:

☐ TC 1600   ☒ TC 1700   ☐ TC 2100   ☐ TC 2600   ☐ TC 2800  
☐ TC 2900   ☐ TC 3600   ☐ TC 3700   ☐ Law Lib   ☐ Other

Pat. &amp; T.M. Office

## Enter your Contact Information below:

Name: Employee Number: Phone: Art Unit or Office: Building & Room Number: Enter the case serial number (Required): 

If not related to a patent application, please enter NA here.

Class / Subclass(es) Earliest Priority Filing Date: 

## Format preferred for results:

☐ Paper   ☐ Diskette   ☒ E-mail

## Provide detailed information on your search topic:

- In your own words, describe in detail the concepts or subjects you want us to search.
- Include synonyms, keywords, and acronyms. Define terms that have special meanings.
- \*For Chemical Structure Searches Only\*  
Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers
- \*For Sequence Searches Only\*  
Include all pertinent information (parent, child, divisional, or issued patent numbers) along with

the appropriate serial number.

- **\*For Foreign Patent Family Searches Only\***  
Include the country name and patent number.
- Provide examples or give us relevant citations, authors, etc., if known.
- FAX or send the **abstract, pertinent claims** (not all of the claims), **drawings, or chemical structures** to your EIC or branch library.

**Enter your Search Topic Information below:**

The compounds of claims 24-31 as a recording medterial for an optical storage medium (disk, disc, dvd).

**Special Instructions and Other Comments:**

(For fastest service, let us know the best times to contact you, in case the searcher needs further clarification on your search.)

Press ALT + F, then P to print this screen for your own information.

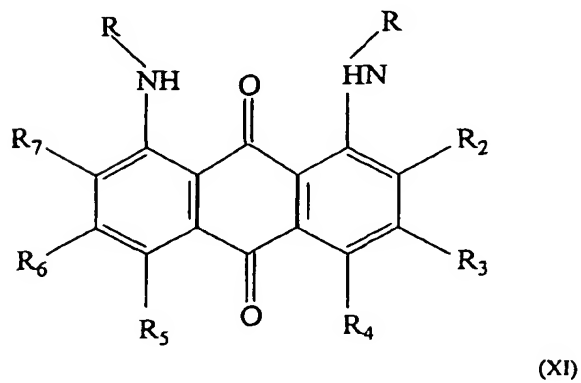
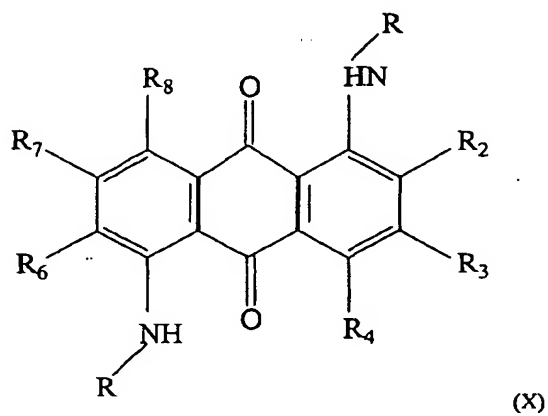
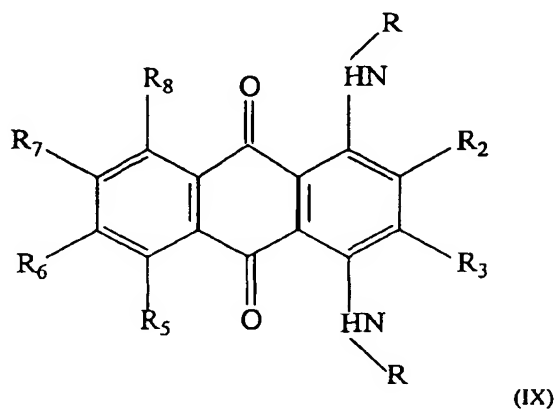
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Last Modified: 08/20/2004 09:04:50

24. The storage medium of Claim 23, wherein the light absorbing material comprises the anthraquinone derivative selected from the group consisting of 1,4-, 1,5- and 1,8-anthraquinone derivatives, and a combination comprising at least one of the foregoing anthraquinone derivatives, having a Formula (IX), (X) and (XI) respectively



wherein  $R_1 - R_7$  are, individually, selected from the group consisting of a hydrogen atom, a hydroxyl group, an aliphatic group, an aromatic group, a heterocyclic group, a halogen atom, a cyano group, a nitro group,  $--COR_9$ ,  $--COOR_9$ ,  $--NR_9R_{10}$ ,  $--NR_{10}COR_{11}$ ,  $--NR_{10}SO_2R_{11}$ ,  $--CONR_9R_{10}$ ,  $--CONHSO_2R_{11}$ , and  $--SO_2NHCOR_{11}$ ; in which  $R_9$  and  $R_{10}$  are, individually, selected from the group consisting of a hydrogen atom, an aliphatic group, an aromatic group, and a heterocyclic group; wherein  $R_{11}$  is selected from the group consisting of an aliphatic group, an aromatic group, and a heterocyclic group; and wherein  $R$  is selected from the group consisting of hydrogen, an alkyl group containing 1 to 20 carbon atoms, a cycloalkyl group containing 3 to 20 carbon atoms, an allyl group containing 3 to 20 carbon atoms, a hydroxyl group, a cyano group, a nitro group, a carboxylic acid, an aryl group containing 6 to 10 carbon atoms, an amino group containing less than or equal to 20 carbon atoms, an amido group containing 1 to 20 carbon atoms, a carbamoyl group containing 1 to 20 carbon atoms, an ester group containing 2 to 20 carbon atoms, an alkoxy or aryloxy group containing 1 to 20 carbon atoms, a sulfonamido group containing 1 to 20 carbon atoms, a sulfamoyl group containing less than or equal to 20 atoms, a 5- membered heterocyclic ring, and a 6- membered heterocyclic ring.

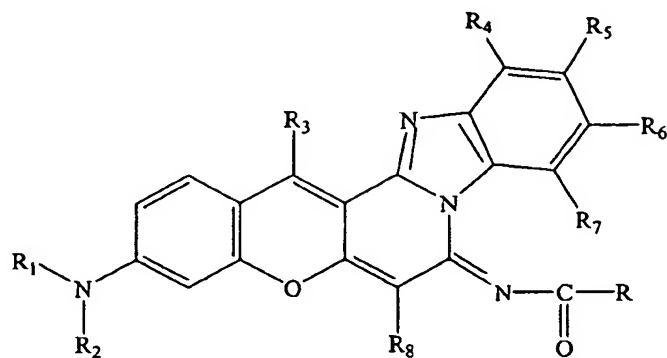
25. The storage medium of Claim 24, wherein the light absorbing material comprises the 1,8-anthraquinone derivatives having the Formula (XI).

26. The storage medium of Claim 25, wherein the light absorbing material comprises 1,8 bis(cyclohexylamino) anthraquinone.

27. The storage medium of Claim 25, wherein the light absorbing material comprises 1,8-dialkylamino anthraquinone.

28. The storage medium of Claim 25, wherein the light absorbing material is present in an amount of about 0.1 wt% to about 0.4 wt%, based upon the total weight of the control portion.

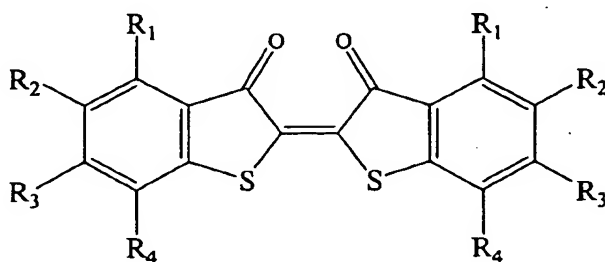
29. The storage medium of Claim 23, wherein the light absorbing material comprises the benzopyran derivative having a Formula (XII)



(XII)

where R is an unsubstituted or substituted aryl group, R<sub>8</sub> is selected from the group consisting of alkoxycarbonyl, nitro, cyano, alkylsulfonyl, benzimidazolyl, benzothiazolyl, benzoxazolyl, or quinoxaliny; R<sub>1</sub> and R<sub>2</sub> are, independently selected from the group consisting of hydrogen, unsubstituted or substituted alkyl groups, wherein the substitution is selected from the group consisting of C<sub>1</sub>-C<sub>15</sub> monovalent hydrocarbyl, alkoxy, cyano, halo, carboxyl, and carbalkoxy.

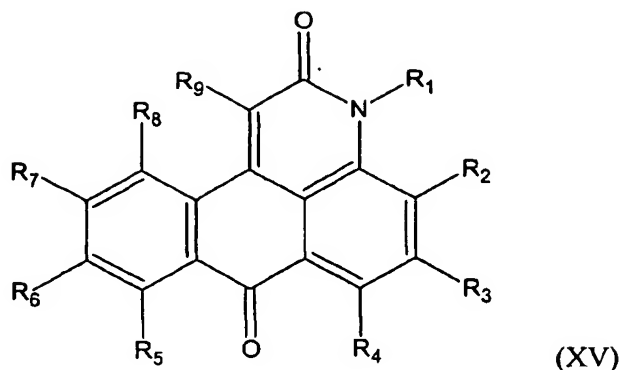
30. The storage medium of Claim 23, wherein the light absorbing material comprises the vat violet dye having the Formula (XIV)



(XIV)

where R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub>, are, individually, selected from the group consisting of hydrogen, halogen, alkyl, aryl, alkoxy, alcoyl, amide, alcohol, nitrile, nitro, ester, and ether.

31. The storage medium of Claim 23, wherein the anthraquinone derivative of Formula (XV)



wherein  $R_1$  is selected from the group consisting of hydrogen, an aliphatic group, an aromatic group, and a heterocyclic group;  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are, individually, selected from the group consisting of hydrogen, an alkyl group having 1 to 20 carbon atoms, a cycloalkyl group having 3 to 20 carbon atoms, an allyl group having 3 to 20 carbon atoms, a hydroxyl group, a cyano group, a nitro group, a carboxylic acid, an aryl group having 6 to 10 carbon atoms, an amino group having less than or equal to 20 carbon atoms, an amido group having 1 to 20 carbon atoms, a carbamoyl group having 1 to 20 carbon atoms, an ester group having 2 to 20 carbon atoms, an alkoxy or aryloxy group having 1 to 20 carbon atoms, a sulfide group having 1 to 20 carbon atoms, a sulfonamido group having 1 to 20 carbon atoms, a sulfamoyl group having less than or equal to 20 atoms, a 5- membered heterocyclic ring, and a 6- membered heterocyclic ring; and wherein at least one group of  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  is different from a hydrogen atom.

32. The storage medium of Claim 31, wherein the light absorbing material is present in an amount of about 0.1 wt% to about 0.4 wt%, based upon the total weight of the control portion.

33. The storage medium Claim 1, wherein the control portion has a transmissivity of less than or equal to about 0.1% at a wavelength of 550 nm.

34. The storage medium Claim 1, wherein the storage medium is a DVD.

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:08:14 ON 30 MAR 2005  
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FILE 'LREGISTRY' ENTERED AT 08:44:00 ON 30 MAR 2005

L1 STR  
L2 STR  
L3 STR  
L4 STR

FILE 'REGISTRY' ENTERED AT 09:25:46 ON 30 MAR 2005

L5 50 S L1  
L6 0 S L2  
L7 24 S L3  
L8 44 S L4

FILE 'HCAPLUS' ENTERED AT 09:45:07 ON 30 MAR 2005

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L10 0 S US20050013232/PN,AP,PRN

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L12 STR  
L13 0 S L12  
L14 STR  
L15 50 S L14  
L16 50 S L11  
L17 STR L12  
L18 11 S L17  
L19 170 S 7678.36.1/RID  
L20 707 S 4364.23.3/RID  
L21 26126 S L16 FUL  
L22 589 S L3 FUL  
SAV L21 MUL642/A  
SAV L22 MUL642A/A

FILE 'HCAPLUS' ENTERED AT 12:42:57 ON 30 MAR 2005

L23 46 S L19  
L24 376 S L20  
L25 16347 S L21  
L26 1084 S L22  
L27 17594 S L23 OR L24 OR L25 OR L26

L28 283 S L27(L)OPTIC?  
 L29 41 S L28 AND LIGH?(3A) (ABSOR? OR ADSOR? OR ADHER?)  
 L30 41 S L27(L)LIGH?(3A) (ABSOR? OR ADSOR? OR ADHER?)  
 L31 71 S L29 OR L30  
 SEL HIT RN 1-  
 L32 22 S L31 AND (DEVIC? OR DISK? OR DISC? OR DVD)  
 L33 22 S L31 AND RECORD?  
 L34 39 S L32 OR L33

FILE 'REGISTRY' ENTERED AT 14:08:14 ON 30 MAR 2005

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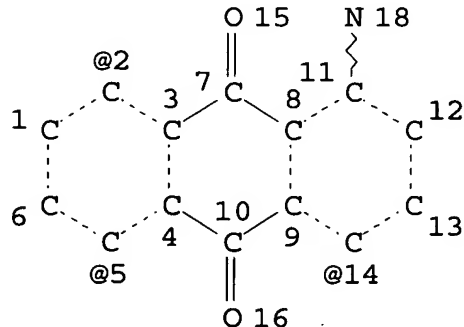
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 L24 376 SEA FILE=HCAPLUS ABB=ON PLU=ON L20

=> d que 125

L11 STR

N @17



VPA 17-14/5/2 U

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE

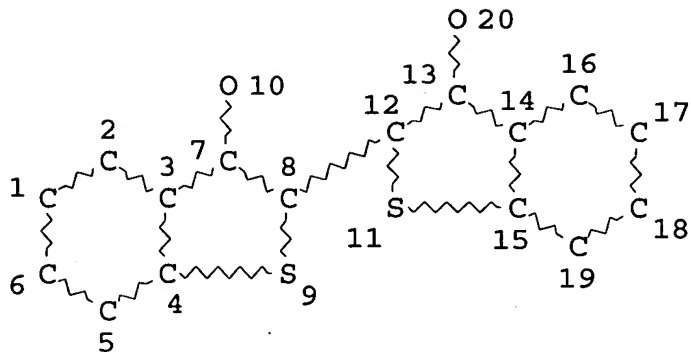
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=> d que 126

L3

STR



NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

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L26 1084 SEA FILE=HCAPLUS ABB=ON PLU=ON L22

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 14:08:59 ON 30 MAR 2005

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=> d l34 1-39 ibib abs hitstr hitind

L34 ANSWER 1 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:99720 HCAPLUS

DOCUMENT NUMBER: 142:207701

TITLE: Limited play optical storage medium, method  
for making the same

INVENTOR(S): Sivakumar, Krishnamoorthy; Schottland,  
Philippe; Sahoo, Binod Behari; Shankarling,  
Ganapati Subray; Sait, Meerakani Mohamed Ali;

Dhalla, Adil Minoo  
 PATENT ASSIGNEE(S): General Electric Company, USA  
 SOURCE: PCT Int. Appl., 80 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 2005010872	A1	20050203	WO 2004-US22482

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-619642 A

2003

0715

AB A limited play optical storage medium for data comprises: a reflective layer, a control portion comprising an optically transparent polymeric resin and a **light absorbing** material, wherein the control portion has a light transmission of greater than or equal to about 70% at 650 nm, a curing index of greater than or equal to about 0.1 and a filtration index of greater than or equal to about 2.5, and wherein the **light absorbing** material has a min. extinction coefficient (measured in CH<sub>2</sub>Cl<sub>2</sub> solution) at 600 nm of greater than or equal to 1,500 mol<sup>-1</sup> cm<sup>-1</sup> L, a maximum extinction

coefficient (measured in CH<sub>2</sub>Cl<sub>2</sub> solution) at 650 nm of less than about

1,000 mol<sup>-1</sup> cm<sup>-1</sup> L, a ratio of extinction coefficient at 650 nm to 600

nm less than about 0.1, and a reactive layer disposed between the reflective layer and the control portion, wherein the reactive layer is designed to limit the time during which data on the medium (disposed on a side of the reactive layer opposite the control portion), can be accessed after exposure to oxygen.

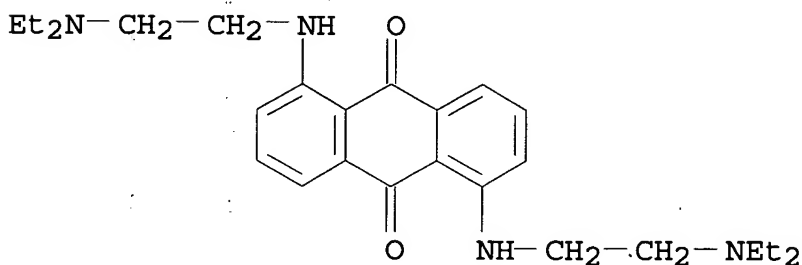
IT 1614-59-1P 33175-76-7P, 1,5-Bis(isopropylamino)anthraquinone 60316-44-1P, 1,8-Bis(isopropylamino)anthraquinone 70711-39-6P 75312-57-1P 478695-69-1P 825190-77-0P 836627-38-4P

(light absorbing material; limited play optical storage medium containing)

RN 1614-59-1 HCAPLUS

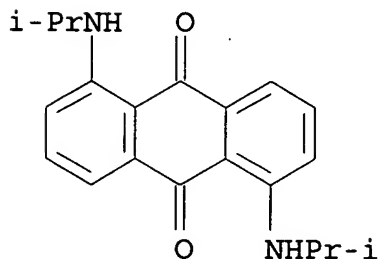
CN 9,10-Anthracenedione, 1,5-bis[[2-(diethylamino)ethyl]amino]-(9CI)

(CA INDEX NAME)

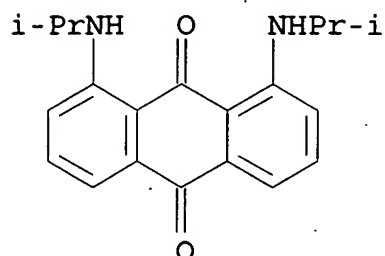


RN 33175-76-7 HCAPLUS

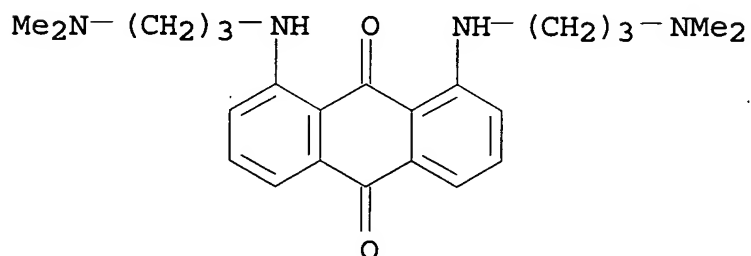
CN 9,10-Anthracenedione, 1,5-bis[(1-methylethyl)amino]-(9CI) (CA INDEX NAME)



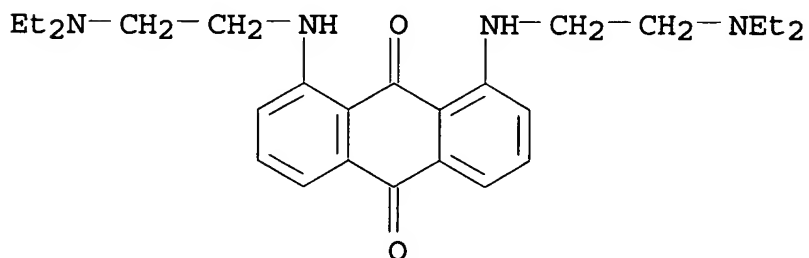
RN 60316-44-1 HCAPLUS  
 CN 9,10-Anthracenedione, 1,8-bis[(1-methylethyl)amino] - (9CI) (CA INDEX NAME)



RN 70711-39-6 HCAPLUS  
 CN 9,10-Anthracenedione, 1,8-bis[[3-(dimethylamino)propyl]amino] - (9CI) (CA INDEX NAME)

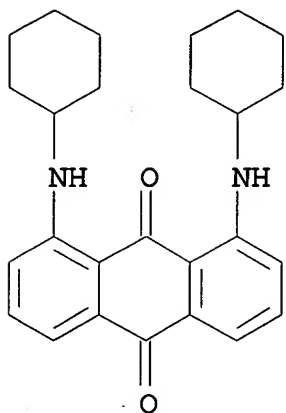


RN 75312-57-1 HCAPLUS  
 CN 9,10-Anthracenedione, 1,8-bis[[2-(diethylamino)ethyl]amino] - (9CI)  
 (CA INDEX NAME)



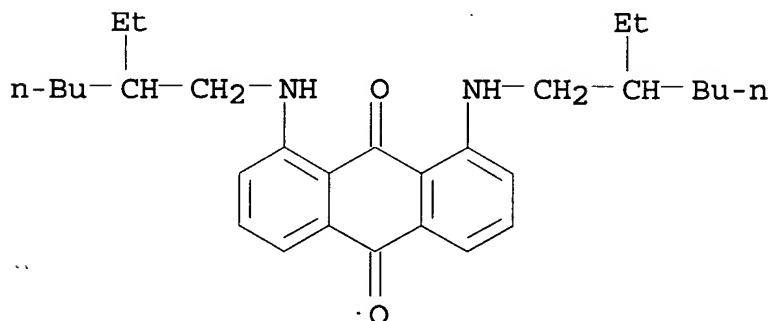
RN 478695-69-1 HCAPLUS

CN 9,10-Anthracenedione, 1,8-bis(cyclohexylamino)- (9CI) (CA INDEX NAME)



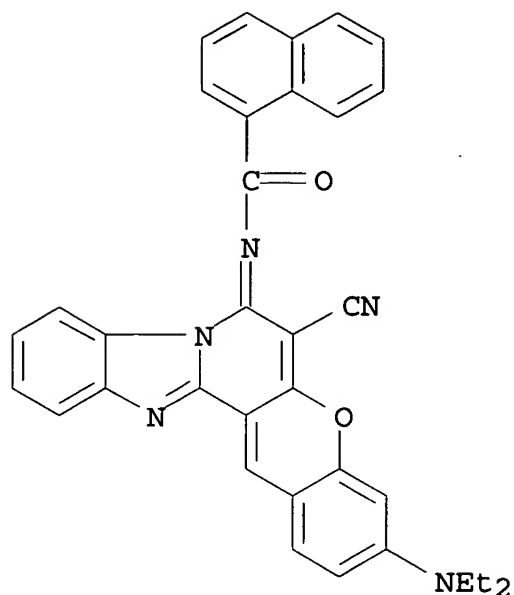
RN 825190-77-0 HCAPLUS

CN 9,10-Anthracenedione, 1,8-bis[(2-ethylhexyl)amino]- (9CI) (CA INDEX NAME)



RN 836627-38-4 HCAPLUS

CN 1-Naphthalenecarboxamide, N-[6-cyano-3-(diethylamino)-7H-[1]benzopyrano[3',2':3,4]pyrido[1,2-a]benzimidazol-7-ylidene]- (9CI) (CA INDEX NAME)

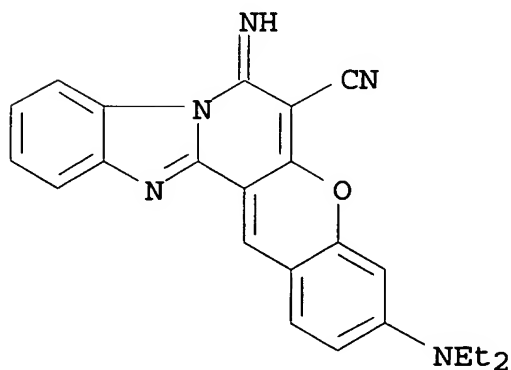


IT 52372-39-1

(preparation of **light absorbing** material for  
limited play **optical** storage medium)

RN 52372-39-1 HCAPLUS

CN 7H-[1]Benzopyrano[3',2':3,4]pyrido[1,2-a]benzimidazole-6-  
carbonitrile, 3-(diethylamino)-7-imino- (9CI) (CA INDEX NAME)



IC ICM G11B007-00

ICS C09B001-28; C09B057-02

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

IT Optical **disks**

**Optical recording materials**

(limited play optical storage medium)

IT 1614-59-1P 33175-76-7P, 1,5-  
Bis(isopropylamino)anthraquinone 60316-44-1P,  
1,8-Bis(isopropylamino)anthraquinone 70711-39-6P  
75312-57-1P 478695-69-1P 825190-77-0P  
836627-38-4P

(light absorbing material; limited play  
optical storage medium containing)

IT 75-31-0, Isopropyl amine, reactions 82-43-9,  
1,8-Dichloroanthraquinone 82-46-2, 1,5-Dichloroanthraquinone  
100-36-7, N,N-Diethylethylenediamine 104-75-6,

**2-Ethylhexylamine**

108-91-8, Cyclohexylamine, reactions 109-55-7 879-18-5,

1-Naphthoyl chloride 52372-39-1

(preparation of light absorbing material for  
limited play optical storage medium)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L34 ANSWER 2 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:372897 HCAPLUS

DOCUMENT NUMBER: 140:376060

TITLE: Amber polyester compositions and container  
articles produced therefromINVENTOR(S): Weaver, Max Allen; Strand, Marc Alan;  
Kendrick, Crystal Leigh; Rhodes, Gerry Foust;  
Williams, Gertrude; Pearson, Jason Clay;  
Upshaw, Timothy Alan

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 32 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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US 2004087688	A1	20040506	US 2002-284592

2002

1031

US 6787589 B2 20040907  
WO 2004041935 A1 20040521 WO 2003-US33490

2003

1022

WO 2004041935 C1 20040826  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,  
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,  
MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,  
RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ,  
UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,  
PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG  
EP 1456299 A1 20040915 EP 2003-774924

2003

1022

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,  
EE, HU, SK

PRIORITY APPLN. INFO.:

US 2002-284592 A

2002

1031

WO 2003-US33490 W

2003

1022

AB This application **discloses** amber colored polyesters suitable for packaging food and beverages. The amber polyester compns. provide excellent blockage of UV and visible light over the wavelength ranges of from about 320-550 nm, rendering them particularly suitable for packaging materials sensitive to UV and visible light over this wavelength range, particularly beer. Thus, di-Me terephthalate 97.0, ethylene glycol 61.5, and 1,4-cyclohexanedimethanol 1.12 g were polymerized in the presence of a

mixture of light absorbing compds. and molded to give a film with good UV and visible light blockage (300-550 nm).

IT 81-78-7, Benzoic acid, 2,2'-[(9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)diimino]bis- 95618-38-5,

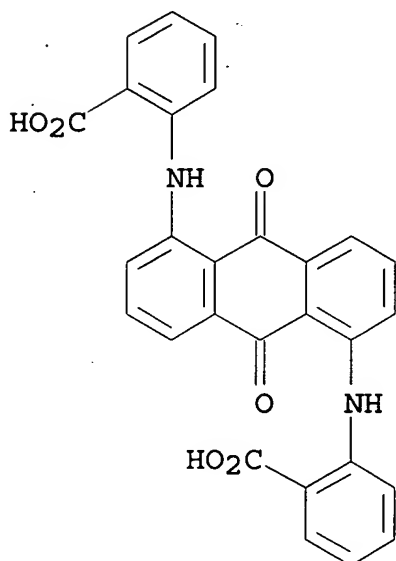
9,10-Anthracenedione, 1,5-bis[(3-hydroxypropyl)amino] -

(light absorbing compound; amber polyester

comps. for container articles with good UV and visible light blockage)

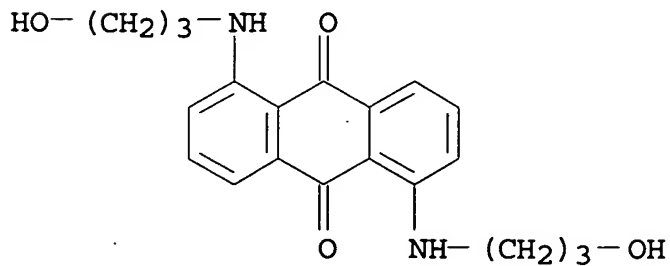
RN 81-78-7 HCAPLUS

CN Benzoic acid, 2,2'-[(9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)diimino]bis- (9CI) (CA INDEX NAME)

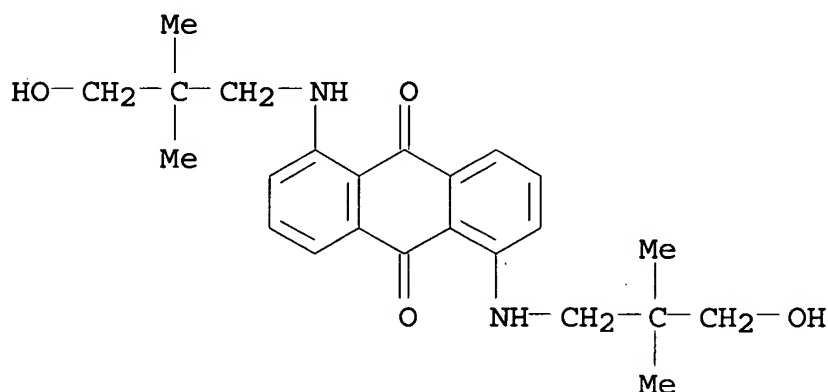


RN 95618-38-5 HCAPLUS

CN 9,10-Anthracenedione, 1,5-bis[(3-hydroxypropyl)amino] - (9CI) (CA INDEX NAME)



IT 134874-82-1, 9,10-Anthracenedione, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino] -  
 (light absorbing compds.; amber polyester  
 compns. for container articles with good UV and visible light  
 blockage)  
 RN 134874-82-1 HCAPLUS  
 CN 9,10-Anthracenedione,  
 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino] -  
 (9CI) (CA INDEX NAME)



IC ICM C08K005-00  
 NCL 523508000  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 17, 38, 41  
 IT 81-78-7, Benzoic acid, 2,2'-[(9,10-dihydro-9,10-dioxo-1,5-anthracenediyl)diimino]bis- 3435-56-1, Propanedioic acid, [[4-(dimethylamino)phenyl]methylene]-, diethyl ester  
 41737-97-7,  
 1,4-Benzenediacetonitrile,  $\alpha,\alpha'$ -bis[3-[4-(dimethylamino)phenyl]-2-propenylidene] - 95618-38-5,  
 9,10-Anthracenedione, 1,5-bis[(3-hydroxypropyl)amino] -  
 148745-62-4, Poly[(methylimino)-1,4-phenylene(2-cyano-1,2-ethenediyl)-1,4-phenylene(1-cyano-1,2-ethenediyl)-1,4-phenylene]  
 (light absorbing compound; amber polyester  
 compns. for container articles with good UV and visible light  
 blockage)  
 IT 3695-85-0, 2-Propenoic acid, 2-cyano-3-(4-hydroxyphenyl)-, methyl ester 53554-75-9, 2-Propenoic acid, 3-[4-[bis[2-(acetyloxy)ethyl]amino]-2-methylphenyl]-2-cyano-, methyl ester  
 72955-44-3, 2-Propenoic acid, 2-cyano-3-(4-hydroxy-3-methoxyphenyl)-, methyl ester 100417-92-3, Propanedioic acid, [3-[4-(dimethylamino)phenyl]-2-propenylidene]-, diethyl ester

105918-68-1, 2,4-Pentadienoic acid, 2-cyano-5-[4-(dimethylamino)phenyl]-, methyl ester 133185-93-0, 2-Propenoic acid,  
3,3'-[1,2-ethanediylbis[oxy(3-methoxy-4,1-phenylene)]]bis[2-cyano-, dimethyl ester 134874-82-1, 9,10-Anthracenedione, 1,5-bis[(3-hydroxy-2,2-dimethylpropyl)amino]-148721-30-6, Poly[oxy-1,2-ethanediyl-oxy(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-phenylene(methylimino)-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)] 684282-03-9 684282-05-1 684282-06-2  
(light absorbing compds.; amber polyester compns. for container articles with good UV and visible light blockage)

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L34 ANSWER 3 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:663497 HCAPLUS  
DOCUMENT NUMBER: 139:181223  
TITLE: Multilayer polyester optical film for bonding on display surface  
INVENTOR(S): Oya, Taro  
PATENT ASSIGNEE(S): Teijin-Du Pont Film Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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JP 2003237006	A2	20030826	JP 2002-43040

2002

0220

PRIORITY APPLN. INFO.:

JP 2002-43040

2002

0220

OTHER SOURCE(S): MARPAT 139:181223

AB The film giving high color purity, contrast, and antireflection without decreasing brightness, is obtained by laminating a UV absorbent-containing polyester layer with a colorant-containing polyester

layer and biaxially orienting the laminate and has haze  $\leq 5\%$  and light transmittance satisfying  $X_{560-610\text{ nm}} \leq 80\%$ ,  $T_{540}/T_{620} < 0.8$ ,  $T_{620}/T_{530} 0.5-1.5$ , and  $T_{450}/T_{530} 0.5-1.5$  ( $X =$  maximum

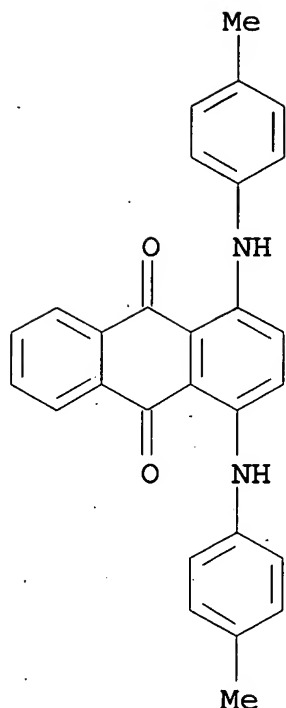
absorption peak wavelength in 540-630 nm-visible light;  $Y =$  maximum absorption peak half width in 540-630 nm-visible light;  $T_{540}$ ,  $T_{450}$ , and  $T_{620}$  are light transmittance at maximum absorption peak wavelength in 540-630 nm-visible light, 450 nm-wavelength, 540 nm-wavelength, and 620 nm-wavelength, resp.). Thus, a HS 299 (dye)-containing poly(ethylene terephthalate) was extruded between extruded UV absorber-containing poly(ethylene terephthalate) layers to give a trilayer laminate, which was biaxially oriented to give a film showing average light transmittance 40-60% and haze 3-5%.

IT 128-80-3, Kayaset Green AB

(dye; multilayer polyester optical film having UV absorber-containing layer and colorant-containing layer for bonding on display surface)

RN 128-80-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



IC ICM B32B027-36  
 ICS B29C055-12; B32B007-02; B32B027-18; B32B027-20; G02B005-22;  
 G02F001-1335; H01J029-89; B29K067-00; B29L007-00;  
 B29L009-00;  
 B29L011-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 73, 74  
 IT Anthraquinone dyes  
 Cyanine dyes  
 Laminated plastic films  
 Optical films  
 Optical imaging **devices**  
 UV stabilizers  
 (multilayer polyester optical film having UV  
 absorber-containing  
 layer and colorant-containing layer for bonding on display  
 surface)  
 IT 128-80-3, Kayaset Green AB 71872-86-1, Kayaset Orange AN  
 401585-25-9, HS 299 401585-32-8, HS 307 401585-61-3, HS 296  
 401586-00-3, Kayaset Yellow EG  
 (dye; multilayer polyester **optical** film having UV  
 absorber-containing layer and colorant-containing layer for  
 bonding on

display surface)

L34 ANSWER 4 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:217004 HCAPLUS  
DOCUMENT NUMBER: 138:245716  
TITLE: Biaxially oriented weather-resistant  
polyester films and their laminated protective films  
for displays with increased contrast  
INVENTOR(S): Oya, Taro  
PATENT ASSIGNEE(S): Teijin-Du Pont Film Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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JP 2003082127	A2	20030319	JP 2001-271530

2001

0907

PRIORITY APPLN. INFO.: JP 2001-271530

2001

0907

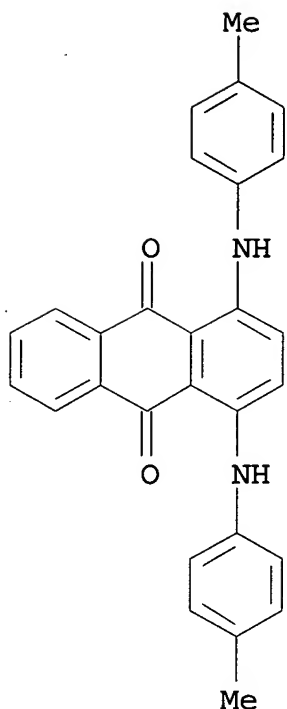
OTHER SOURCE(S): MARPAT 138:245716

AB The polyester films containing UV **absorbers** and visible **light absorbers** with haze  $\leq 5\%$ , average transmittance of light at 450-650 nm ( $T_{av}$ ) 0.40-0.80, and  $T_i/T_{av}$  0.70-1.30 ( $T_i$  = light transmittance at wavelength  $i$ ). The laminates may have a pressure-sensitive adhesive layer, a hard coat layer, and an antireflective layer.

IT 128-80-3, Kayaset Green AB  
(visible **light absorber**; weather-resistant **optical** polyester films for displays)

RN 128-80-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)



IC ICM C08J005-18  
 ICS B29C055-12; B32B007-02; B32B027-18; B32B027-36; C08K005-35;  
 C08L067-00; C09K003-00; G02B001-10; B29K067-00; B29L007-00;  
 B29L011-00

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38

IT Carbon black, uses  
 (visible **light absorber**; weather-resistant  
 optical polyester films for displays)

IT Antireflective films  
 Optical imaging **devices**  
 UV stabilizers  
 (weather-resistant optical polyester films for displays)

IT 128-80-3, Kayaset Green AB 96777-98-9, Kayaset Black AN  
 (visible **light absorber**; weather-resistant  
 optical polyester films for displays)

L34 ANSWER 5 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:14165 HCAPLUS  
 DOCUMENT NUMBER: 138:57146  
 TITLE: Biaxially oriented polyester films for  
 optical

INVENTOR(S): Oya, Taro; Iida, Makoto; Fukuda, Masayuki  
 PATENT ASSIGNEE(S): Teijin Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
JP 2003001703	A2	20030108	JP 2001-191058

2001

0625

PRIORITY APPLN. INFO.:

JP 2001-191058

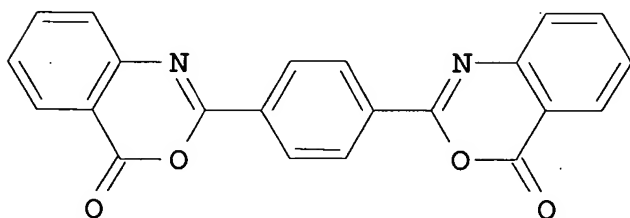
2001

0625

OTHER SOURCE(S):

MARPAT 138:57146

GI



I

AB The films suitable for bonding on displays for protection, comprise **light absorbers** and UV **absorbers** and have **light** transmittance of visible light with wave length 400-650 nm to satisfy  $X = 560-610$  nm;  $Y \leq 80$  nm;  $T_{abs}/T_{540} < 0.80$ ;  $0.5 < T_{620}/T_{540} < 1.5$ ; and  $0.5 < T_{450}/T_{540} < 1.5$ , where X, Y, and Tabs represent wave length, half width, and transmittance at maximum absorption peak in 540-630

nm-visible light, resp., and T450, T540, and T620 represent transmittance at wave length 450, 540, and 620 nm, resp. Thus, a biaxially oriented film containing poly(ethylene terephthalate),

I (UV

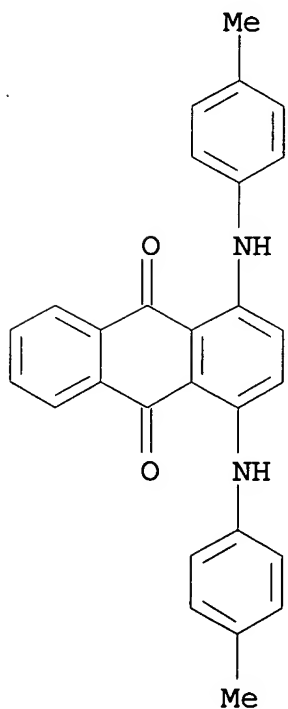
absorber), HS 299 (dye as **light absorber**), and SiO<sub>2</sub> showed **light** transmittance 40-60% and haze ≤2.0%.

IT 128-80-3, Kayaset Green AB

(**light absorber**; biaxially oriented polyester **optical** films containing UV **absorbers** and **light absorbers** for display protection)

RN 128-80-3 HCAPLUS.

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)



IC ICM B29C055-12

ICS B32B027-36; C08J005-18; C08K005-357; C08L067-00; C09J007-02; C09J167-00; B29K067-00; B29L007-00; B29L011-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 74

ST polyester optical film display protection; UV absorber PET optical

film; **light absorber** PET optical film

- IT Adhesive films  
Optical films  
Optical imaging **devices**  
UV stabilizers  
(biaxially oriented polyester optical films containing UV **absorbers** and **light absorbers** for display protection)
- IT Polyesters, uses  
(biaxially oriented polyester optical films containing UV **absorbers** and **light absorbers** for display protection)
- IT 18600-59-4 49861-20-3  
(UV absorber; biaxially oriented polyester optical films containing UV **absorbers** and **light absorbers** for display protection)
- IT 41686-21-9, Ethyl acrylate-2-hydroxyethyl methacrylate-methyl methacrylate-N-methylolacrylamide copolymer 161122-25-4, Diethylene glycol-ethylene glycol-isophthalic acid-2,6-naphthalenedicarboxylic acid-sodium 5-sulfoisophthalate copolymer (adhesive layer containing; biaxially oriented polyester optical films containing UV **absorbers** and **light absorbers** for display protection)
- IT 128-80-3, Kayaset Green AB 71872-86-1, Kayaset Orange AN 401585-25-9, HS 299 401585-32-8, HS 307 401585-61-3, HS 296 401586-00-3, Kayaset Yellow EG (light absorber; biaxially oriented polyester optical films containing UV **absorbers** and **light absorbers** for display protection)

L34 ANSWER 6 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:847862 HCAPLUS

DOCUMENT NUMBER: 137:343945

TITLE: Colored master pellets for optical moldings and their use in colored optical **disk** substrates

INVENTOR(S): Sakamoto, Akihiro; Ninomiya, Hideo; Shimizu, Hisayoshi

PATENT ASSIGNEE(S): Teijin Chemicals Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 2002322290	A2	20021108	JP 2001-129659

2001

0426

PRIORITY APPLN. INFO.:

JP 2001-129659

2001

0426

AB The pellets are formed from compns. containing colorants and transparent thermoplastic resins (e.g., aromatic polycarbonates), and  $\geq 90\%$  of the pellets satisfy colorant d.  $0.5X-1.5X$  ( $X$  = average value of colorant d. expressed by **light absorption**). Optionally, the pellets have length 2.0-3.3 mm, cross-sectional long diameter 2.0-3.5 mm, number of  $\geq 200$   $\mu\text{m}$ -foreign matter per 1 kg  $\leq 1$ , and content of the colored composition-derived powder having size  $\leq 1.0$  mm  $\leq 250$  ppm. Manufacturing steps of the pellets are also described.

Colored optical **disks**, CD-R, or DVD-R are formed from molding materials containing 3-50% of the above master

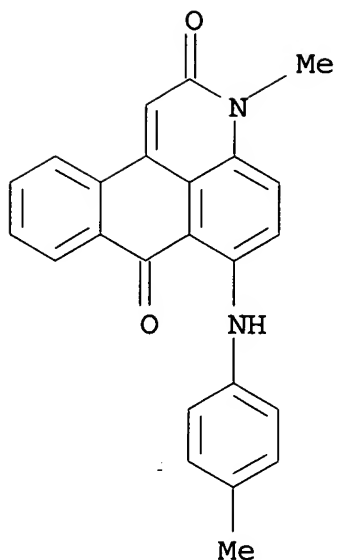
pellets and 50-97% of transparent thermoplastic resin pellets. Since the master pellets have uniform color d., molded articles such as optical **disks** have uniform color and are free of color streaks.

IT 81-39-0, C.I. Solvent Red 52 81-42-5, C.I. Disperse Violet 28 128-80-3, Oil Green 5602 522-75-8, C.I. Vat Red 41 6371-23-9, C.I. Vat Red 2 6492-68-8, C.I. Vat Red 47 10114-49-5, C.I. Solvent Red 207 21295-57-8, C.I. Solvent Red 149 28198-05-2, C.I. Solvent Green 20 32724-62-2, Macrolex Blue RR

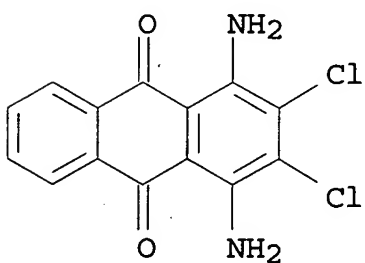
(colorant; colored master pellets for **optical** moldings for colored **optical disk** substrates)

RN 81-39-0 HCAPLUS

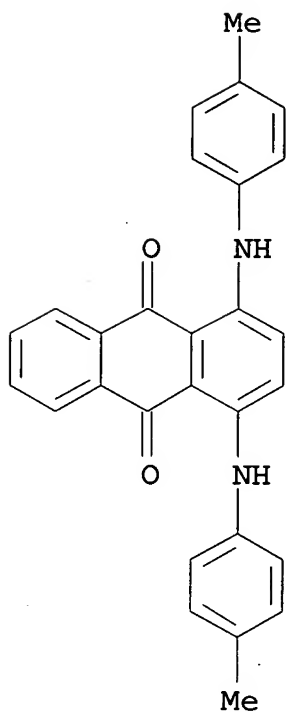
CN 3H-Naphtho[1,2,3-de]quinoline-2,7-dione, 3-methyl-6-[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



RN 81-42-5 HCAPLUS  
CN 9,10-Anthracenedione, 1,4-diamino-2,3-dichloro- (9CI) (CA INDEX NAME)

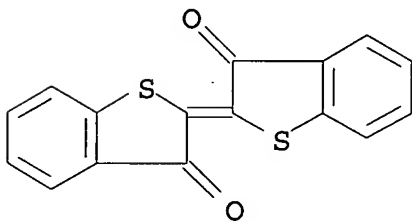


RN 128-80-3 HCAPLUS  
CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



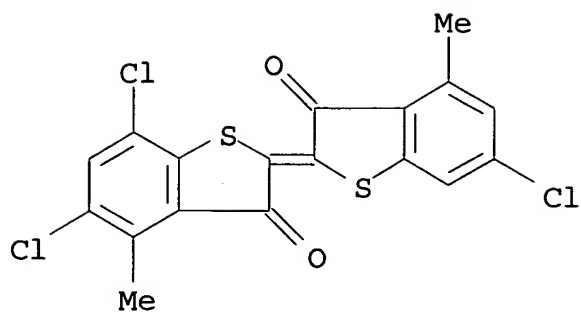
RN 522-75-8 HCAPLUS

CN Benzo[b]thiophen-3(2H)-one, 2-(3-oxobenzo[b]thien-2(3H)-ylidene)-(9CI) (CA INDEX NAME)



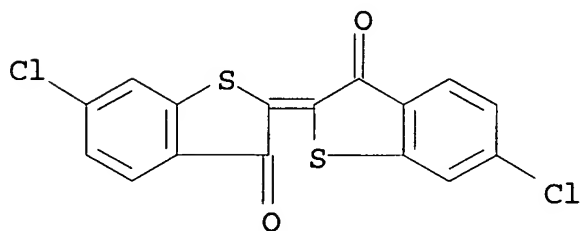
RN 6371-23-9 HCAPLUS

CN Benzo[b]thiophen-3(2H)-one, 5,7-dichloro-2-(6-chloro-4-methyl-3-oxobenzo[b]thien-2(3H)-ylidene)-4-methyl- (9CI) (CA INDEX NAME)



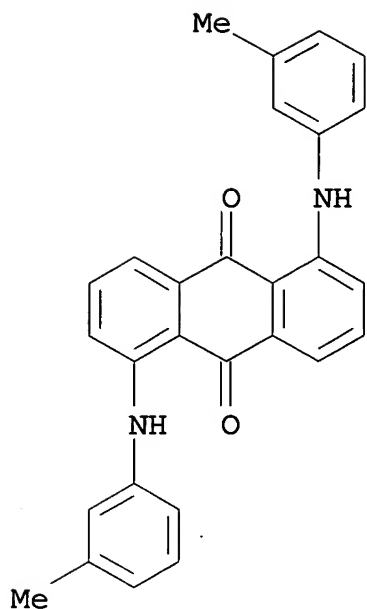
RN 6492-68-8 HCAPLUS

CN Benzo[b]thiophen-3(2H)-one, 6-chloro-2-(6-chloro-3-oxobenzo[b]thien-2(3H)-ylidene)- (9CI) (CA INDEX NAME)



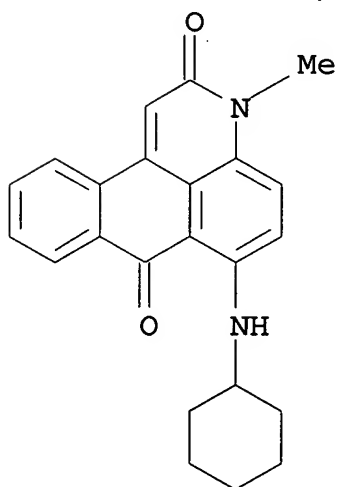
RN 10114-49-5 HCAPLUS

CN 9,10-Anthracenedione, 1,5-bis[(3-methylphenyl)amino]- (9CI) (CA INDEX NAME)



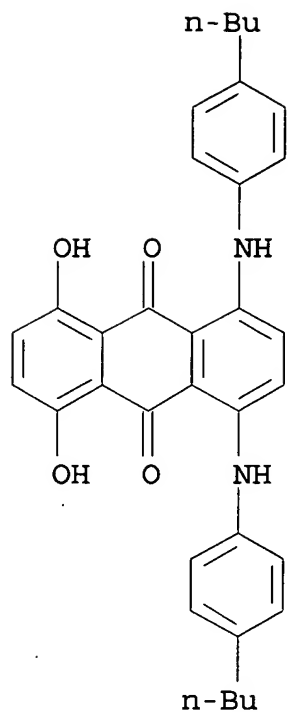
RN 21295-57-8 HCAPLUS

CN 3H-Naphtho[1,2,3-de]quinoline-2,7-dione, 6-(cyclohexylamino)-3-methyl- (8CI, 9CI) (CA INDEX NAME)



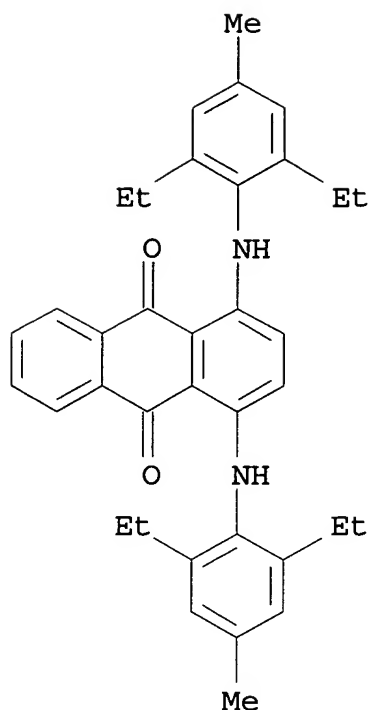
RN 28198-05-2 HCAPLUS

CN 9,10-Anthracenedione,  
1,4-bis[(4-cyclohexylphenyl)amino]-5,8-dihydroxy-  
(9CI) (CA INDEX NAME)



RN 32724-62-2 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(2,6-diethyl-4-methylphenyl)amino]-(9CI) (CA INDEX NAME)



- IC ICM C08J003-22  
 ICS C08J005-00; C08K005-00; C08L101-00; C09B001-22; C09B001-28;  
 C09B005-14; C09B056-00; C09B057-00; C09B067-22; G11B007-24
- CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38
- ST colorant master pellet thermoplastic resin optical **disk**
- IT Polycarbonates, uses  
 (aromatic; colored master pellets for optical moldings for  
 colored  
 optical **disk** substrates)
- IT Dyes  
 Optical ROM **disks**  
 Pellets  
 (colored master pellets for optical moldings for colored  
 optical **disk** substrates)
- IT Coloring materials  
 (pellets; colored master pellets for optical moldings for  
 colored optical **disk** substrates)
- IT 81-39-0, C.I. Solvent Red 52 81-42-5, C.I.  
 Disperse Violet 28 81-48-1, C.I. Solvent Violet 13 128-66-5,  
 C.I. Vat Yellow 4 128-70-1, C.I. Vat Orange 9 128-80-3  
 , Oil Green 5602 522-75-8, C.I. Vat Red 41 1324-11-4,

C.I. Vat Orange 1 1324-33-0, C.I. Vat Orange 4 1324-35-2,  
C.I. Vat Orange 2 6371-23-9, C.I. Vat Red 2 6492-68-8  
, C.I. Vat Red 47 6706-75-8, C.I. Solvent Red 22 6829-22-7,  
Plast Red 8370 6925-69-5, C.I. Solvent Orange 60 8003-22-3,  
C.I. Solvent Yellow 33 8005-40-1, C.I. Solvent Violet 14  
10114-49-5, C.I. Solvent Red 207 12226-86-7, C.I.  
Solvent Orange 55 12671-74-8, C.I. Solvent Yellow 98  
16294-75-0, C.I. Solvent Orange 63 20749-68-2, C.I. Solvent Red  
135 21295-57-8, C.I. Solvent Red 149 28198-05-2  
, C.I. Solvent Green 20 32724-62-2, Macrolex Blue RR  
34185-28-9, Plast Yellow 8010 35773-43-4, Macrolex Fluorescent  
Yellow 10GN 42757-85-7, Plast Yellow 8050 71832-19-4, C.I.  
Solvent Red 168 74113-99-8, C.I. Solvent Blue 87 75216-43-2,  
C.I. Disperse Yellow 160 82953-57-9, Lumogen F Orange 240  
95567-21-8, C.I. Solvent Red 150 100443-95-6, Lumogen F Yellow  
083 114013-41-1, C.I. Solvent Red 151 123515-19-5, C.I.  
Solvent Blue 94 226894-64-0, C.I. Solvent Yellow 54  
389105-45-7, Macrolex Fluorescent Red G 389105-46-8, Plast Red

D 54 389105-49-1, Kp Plast Red HG 389105-50-4, Kp Plast Red H

2G 422509-61-3, Lumogen F Red 305 474271-67-5, C.I. Solvent Red

191 474274-15-2, Lumogen F Red 339  
(colorant; colored master pellets for **optical**  
moldings for colored **optical disk**  
substrates)

IT 24936-68-3, Bisphenol A-phosgene copolymer, SRU, uses  
25971-63-5, Bisphenol A-phosgene copolymer 174408-80-1,  
Bisphenol M-bisphenol TMC-phosgene copolymer 400716-93-0,  
Bisphenol A-bisphenol A disodium salt-carbonic acid copolymer  
(colored master pellets for optical moldings for colored  
optical **disk** substrates)

L34 ANSWER 7 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:673169 HCAPLUS  
DOCUMENT NUMBER: 137:208170  
TITLE: Macromolecular electroluminescent element  
with

light absorption layer  
INVENTOR(S): Komaki, Hatsumi; Kai, Teruhiko; Sekine,  
Tokumasa; Minato, Takao

PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
JP 2002252086	A2	20020906	JP 2001-48018

2001

0223

PRIORITY APPLN. INFO.: JP 2001-48018

2001

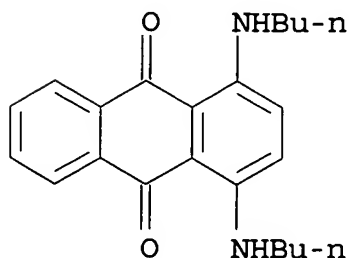
0223

AB The invention refers to a polymer electroluminescent **device** comprising a transparent or semitransparent anode, a polymeric luminescent layer, and a cathode on a transparent substrate, wherein a light absorbing layer containing a dye is placed between the luminescent layer and the cathode in order to prevent outside light from reflecting off of the cathode and to produce a high contrast luminescent surface.

IT 17354-14-2, Solvent blue 35  
 (macromol. electroluminescent element **light absorption layer**)

RN 17354-14-2 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis(butylamino) - (9CI) (CA INDEX NAME)



IC ICM H05B033-22

ICS H05B033-22; H05B033-10; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related

Properties)

IT Electroluminescent **devices**  
 (displays, polymer; macromol. electroluminescent element light  
 absorption layer)  
 IT 13007-86-8, Aniline black 17354-14-2, Solvent blue 35  
 138184-36-8, MEH-PPV  
 (macromol. electroluminescent element **light**  
**absorption** layer)

L34 ANSWER 8 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:157901 HCAPLUS

DOCUMENT NUMBER: 136:201429

TITLE: Biaxially-oriented polyester film with high  
 optical contrast and color purity for

adhesive

sheet of display screen

INVENTOR(S): Oya, Taro; Fukuda, Masayuki; Handa, Makoto

PATENT ASSIGNEE(S): Teijin Limited, Japan

SOURCE: PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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-----			
WO 2002016497	A1	20020228	WO 2001-JP6979
2001			
0813			
W: KR, US			
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,			
MC, NL, PT, SE, TR			
JP 2002137290	A2	20020514	JP 2001-54037
2001			
0228			
JP 2002258760	A2	20020911	JP 2001-54038
2001			
0228			

EP 1279700 A1 20030129 EP 2001-955699

2001

0813

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, FI, CY, TR

TW 583263 B 20040411 TW 2001-90120421

2001

0820

US 2003008162 A1 20030109 US 2002-182204

2002

0726

US 6589649 B2 20030708  
PRIORITY APPLN. INFO.: JP 2000-252174 A

2000

0823

JP 2001-54038 A

2001

0228

WO 2001-JP6979 W

2001

0813

OTHER SOURCE(S): MARPAT 136:201429

AB Title biaxially-oriented polyester film is dispersed with pigments

to have (A) the maximum **absorption** peak of **light** from wavelength 540 nm to 630 nm at a wavelength (X) between 560 nm and 610 nm; (B) the half-width half-maximum (HWHM) 80 nm; (C) the transmission ratio between at X and 540 nm ( $T_x/T_{540}$ )  $\leq 0.80$ ; and (D) the transmission ratio between at 620 nm (450 nm) and 540 nm ( $T_{620(450)}/T_{540}$ ) 0.5-1.5. Thus, a PET film containing pigment HS-299 0.05 and porous silica 0.007 wt% was biaxially oriented

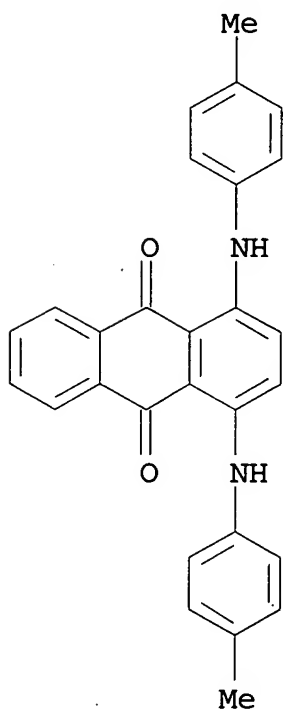
(3.5 + 3.8) to give a stretched film showing  $\lambda = 594$  nm,  
 HWHM = 32 nm,  $T_x/T_{540} = 0.27$ , and  $T_{620}(450)/T_{540} = 1.23$ .

IT 128-80-3, Kayaset Green AB

(as pigment for biaxially-oriented polyester film with high  
**optical** contrast and color purity)

RN 128-80-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino]- (9CI) (CA  
 INDEX NAME)



IC ICM C08L067-00

ICS C08K005-353; C08J005-18

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42, 73, 74

IT Anthraquinone dyes

Antireflective films

Optical imaging **devices**

(biaxially-oriented polyester film with high optical contrast  
 and color purity for)

IT 81-48-1, Kayaset Blue A2R 128-80-3, Kayaset Green AB

198-55-0D, Perylene, derivs. 574-93-6D, Phthalocyanine, derivs.

1047-16-1D, Quinacridone, derivs. 54300-60-6D, Pyrromethene,

derivs. 71872-86-1, Kayaset Orange AN 96777-98-9, Kayaset

Black AN 401585-25-9, HS 299 401585-32-8, HS 307

401585-61-3, HS 296

(as pigment for biaxially-oriented polyester film with high  
**optical** contrast and color purity)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L34 ANSWER 9 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:885153 HCAPLUS

DOCUMENT NUMBER: 137:7481

TITLE: Electrical and optical properties of  
anthraquinone vat and vat-disperse dyes

AUTHOR(S): Ali, N. F.; Hakim, I. K.; Shakra, S.

CORPORATE SOURCE: National Research Centre, Cairo, Egypt

SOURCE: Journal of the Textile Association (2001),  
62(3), 91-98

CODEN: JTXAA9; ISSN: 0368-4636

PUBLISHER: K. P. Publisher

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The dipole moment for fourteen anthraquinone vat dyes were  
obtained through their static dielec. consts. and refractive  
indexes of their dilute solution in either dioxane or benzene or  
both

at temps. between 20 and 49°C. Also their  
**lightfastness** and the maximum **absorption** spectra  
( $\lambda_{\max}$ ) are **recorded**. From the results obtained,  
it was found that the dipole moment (m) is directly proportional  
to maximum absorption spectra ( $\lambda_{\max}$ ) and sublimation fastness  
while it is more or less reversible with the lightfastness.

IT 2987-68-0, 1,4-Dibenzamidoanthraquinone 6370-58-7

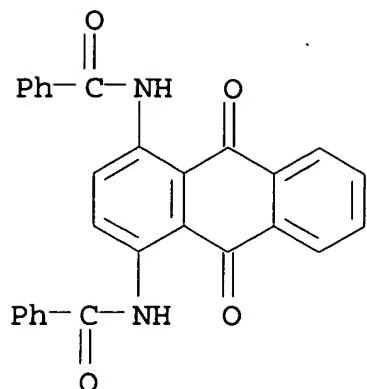
6417-48-7 6534-28-7, 1,4-

Diacetamidoanthraquinone 75083-42-0 433282-41-8

(dye; elec. and **optical** properties of anthraquinone  
vat and vat-disperse dyes)

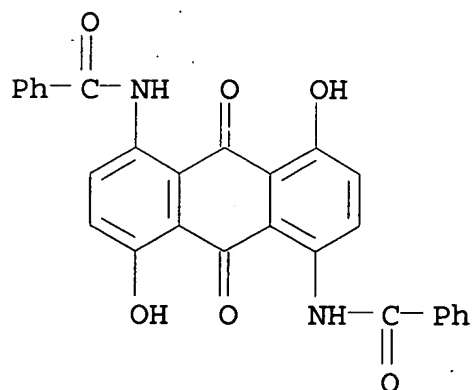
RN 2987-68-0 HCAPLUS

CN Benzamide, N,N'-(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)bis-  
(9CI) (CA INDEX NAME)



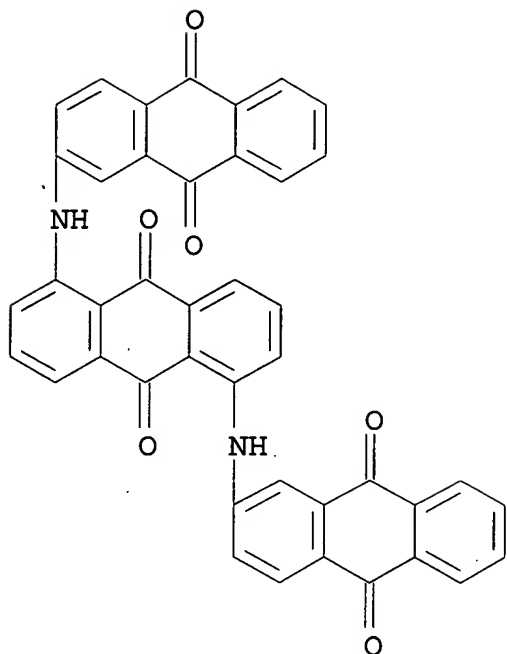
RN 6370-58-7 HCAPLUS

CN Benzamide, N,N'-(9,10-dihydro-4,8-dihydroxy-9,10-dioxo-1,5-anthracenediyl)bis- (9CI) (CA INDEX NAME)



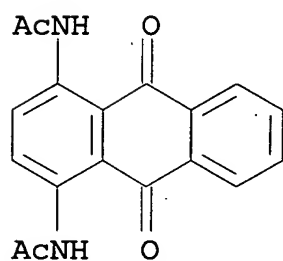
RN 6417-48-7 HCAPLUS

CN 9,10-Anthracenedione, 1,5-bis[(9,10-dihydro-9,10-dioxo-2-anthracenyl)amino] - (9CI) (CA INDEX NAME)



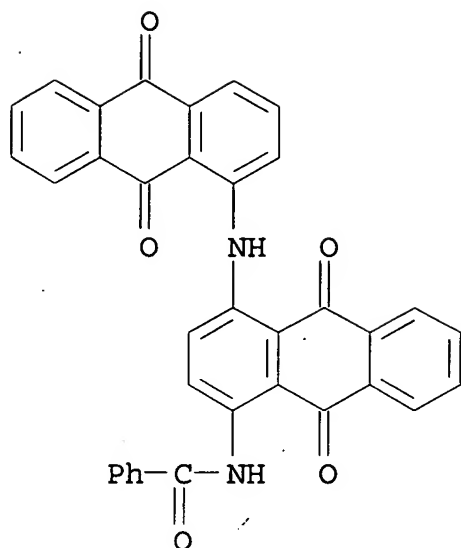
RN 6534-28-7 HCAPLUS

CN Acetamide, N,N'-(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)bis-  
(9CI) (CA INDEX NAME)



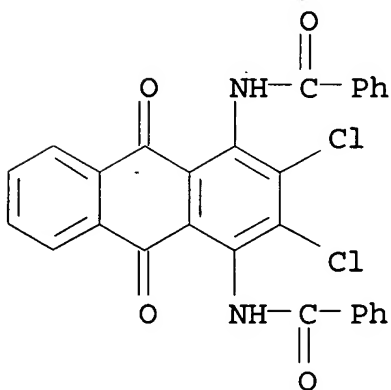
RN 75083-42-0 HCAPLUS

CN Benzamide, N-[4-[(9,10-dihydro-9,10-dioxo-1-anthracenyl)amino]-  
9,10-dihydro-9,10-dioxo-1-anthracenyl]- (9CI) (CA INDEX NAME)



RN 433282-41-8 HCAPLUS

CN Benzamide, N,N'-(2,3-dichloro-9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)bis- (9CI) (CA INDEX NAME)



CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 40

IT 82-22-4, 1,1'-Dianthraquinonylamine 116-71-2, Violanthrone  
 128-58-5 128-59-6 2987-68-0, 1,4-Dibenzamidoanthraquinone 3571-23-1, 1-Benzamidoanthraquinone  
 6370-58-7 6417-48-7 6534-28-7,  
 1,4-Diacetamidoanthraquinone 28780-09-8 75083-42-0  
 433282-41-8 433282-42-9 433282-43-0

(dye; elec. and **optical** properties of anthraquinone  
vat and vat-disperse dyes)

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L34 ANSWER 10 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:194550 HCAPLUS

DOCUMENT NUMBER: 134:245299

TITLE: Microcapsules containing liquids separable  
into plurality of phases, manufacture of the  
microcapsules, and display **device**  
using the microcapsules

INVENTOR(S): Kato, Ikuo; Okada, Takashi; Kondo, Hitoshi

PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
1999	JP 2001070783	A2	20010321	JP 1999-288276
1008	US 6514328	B1	20030204	US 2000-497947
2000				
0204				
PRIORITY APPLN. INFO.:				JP 1999-184710 A
1999				
0630				
				JP 1999-29238 A
1999				
0205				

JP 1999-288276 A

1999

1008

JP 2000-26043 A

2000

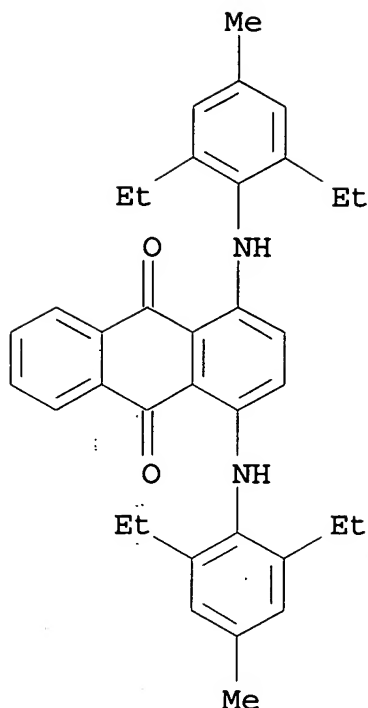
0203

AB The microcapsules contain plurality of solvents and/or dispersing mediums separable into  $\geq 2$  phases at a temperature in using wherein the amts. of the liqs. are regulated as follows. Difference between the amount of 1 of the liqs. (A) dissolved in another liquid (B) at the temperature in use and the dissolved amount at a higher temperature is the amount of A whose phase is separated from that of B at the temperature in use. The display **device** has a means of changing light absorption and/or reflection according to change of phys. state and/or chemical state of dyes and/or pigments in the microcapsules. The microcapsules, in which liqs. with different properties are separated in  $\geq 2$  phases at a uniform ratio, provides uniformly displayed images under electrophoresis, etc.

IT 32724-62-2, Macrolex Blue RR  
(in microcapsules containing phase-separated liqs. for display **device** providing image corresponding to **light absorption** and reflection)

RN 32724-62-2 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(2,6-diethyl-4-methylphenyl)amino]-(9CI) (CA INDEX NAME)



IC ICM B01J013-14-

ICS B41M005-36; C09B067-08; C09D011-00; G02F001-19

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 45

ST microcapsule phase sep'd solvent dispersing medium; display **device** microcapsule light absorption reflection; dye pigment microcapsule solvent dispersing medium

IT Isoalkanes

(C13-14, Isopar M; microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)

IT Isoalkanes

(C9-12, Isopar H; microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)

IT Polysiloxanes, uses

(SH200 5CS; microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)

- IT Coupling agents  
(fluorine-containing silane, for modification of pigment; in microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT Emulsification  
(for preparation of microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT Dyes  
Pigments, nonbiological  
(in microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT Fluoropolymers, uses  
(in microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT Disperse systems  
Microcapsules  
Optical imaging **devices**  
Solvents  
(microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT Electrophoresis  
(microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection using)
- IT 16627-68-2  
(T 5216; microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT 9002-84-0, Teflon 7A-J 13463-67-7, Titania, uses 32724-62-2, Macrolex Blue RR  
(in microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light absorption and reflection)
- IT 108-95-2, Phenol, uses 112-80-1, Oleic acid, uses 335-36-4, Fluorinert FC 75 540-84-1, 2,2,4-Trimethylpentane 1077-16-3, Hexylbenzene 1330-78-5, Tricresyl phosphate 7732-18-5, Water, uses 51142-49-5, Fluorinert FC 40 163702-05-4, HFE 7200 316806-89-0, Fluorinert FC 3283  
(microcapsules containing phase-separated liqs. for display **device** providing image corresponding to light

absorption and reflection)

L34 ANSWER 11 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:911547 HCAPLUS

DOCUMENT NUMBER: 134:78730

TITLE: Optical filter

INVENTOR(S): Ikuhara, Isao; Yamada, Tsukasa; Ando, Takumi

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
2000	WO 2000079316	A1	20001228	WO 2000-JP3909
0615	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	EP 1189078	A1	20020320	EP 2000-937251

2000

0615

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 6849327 B1 20050201 US 2001-979027

2001

1115

## PRIORITY APPLN. INFO.:

JP 1999-171323

A

1999

0617

JP 1999-175582

A

1999

0622

JP 1999-184003

A

1999

0629

WO 2000-JP3909

W

2000

0615

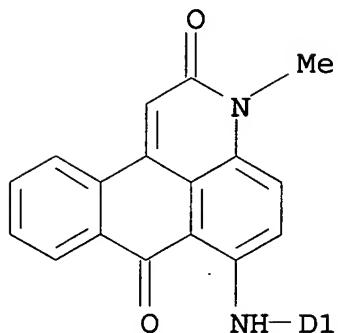
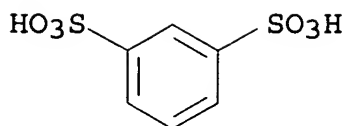
AB An optical filter having a filter layer **absorbing** a visible **light**, a transparent supporter, in particular a transparent supporter comprising a biaxially stretched film, and antireflection layer, characterized in that it has at least one filter layer containing a coloring matter and a polymer binder on at least one side of the transparent support and has an antireflection layer having the antireflection ability for a visible light on the side of the supporter opposite to the filter layer when it has a filter layer only on one side of the supporter, or on either side of the supporter when it has filter layers on both sides, wherein the transparent supporter is a biaxially stretched film having a thickness of 10 to 500  $\mu\text{m}$ . The optical filter is attached to an image display **device** such as a plasma display for the purpose of the prevention of reflection and the correction of color reproduction

IT 315193-01-2

(dye in **optical** filter for **optical** image display **device**)

RN 315193-01-2 HCAPLUS

CN 1,3-Benzenedisulfonic acid, 4(or 5)-[(2,7-dihydro-3-methyl-2,7-dioxo-3H-naphtho[1,2,3-de]quinolin-6-yl)amino]-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

IC ICM G02B005-22  
 ICS C09D005-00; C09D133-06; C09D125-10  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 73  
 ST optical filter plasma display image display **device**  
 IT Cathode ray tubes  
 (faceplates; optical filter for optical image display  
**device** especially for)  
 IT Gelatins, uses  
 Polycarbonates, uses  
 Polyesters, uses  
 (in optical filter for optical image display **device**)  
 IT Optical filters  
 (optical filter for optical image display **device**)  
 IT Plasma display panels  
 (optical filter for optical image display **device** especially  
 for)  
 IT 63870-34-8 65132-20-9 116880-69-4 128763-07-5 264602-35-9  
 315193-01-2  
 (dye in **optical** filter for **optical** image  
 display **device**)

IT 9003-55-8, LX 407C5 9012-09-3, Triacetylcellulose 9081-54-3,  
Rhoplex HA 16 25038-59-9, Poly(ethylene terephthalate), uses  
26124-53-8, Acrylic acid-methyl acrylate-vinylidene chloride  
copolymer

(in optical filter for optical image display **device**)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS  
AVAILABLE

IN THE RE FORMAT

L34 ANSWER 12 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:779578 HCAPLUS

DOCUMENT NUMBER: 130:58878

TITLE: Optical sheet used for front panel of optical  
imaging **device**

INVENTOR(S): Ogawa, Tokuji; Obori, Kunihiro

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 10319231	A2	19981204	JP 1997-128139

1997

0519

PRIORITY APPLN. INFO.: JP 1997-128139

1997

0519

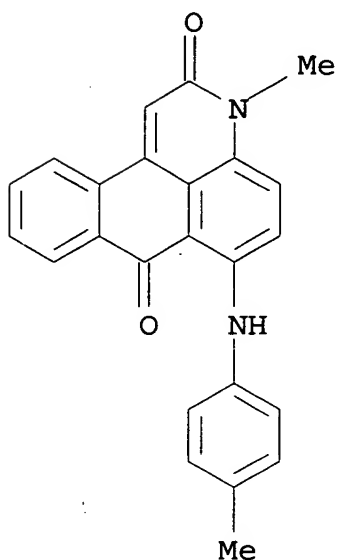
AB An optical sheet used for a front panel of an optical imaging  
**device** to improve color resolns., is made of a resin  
composition composed of a transparent resin and **light**  
**absorbing** compds., wherein the transmittance of the  
optical sheet is 70-85%, 60-80%, and 50-75% for 430-480 nm,  
530-570 nm, and 600-630 nm, resp., and the transmittances at 450  
nm, 545 nm, and 610 nm, decrease in that order.

IT 81-39-0, Macrolex red 5B 128-80-3, Diaresin

green C 99258-95-4, Macrolex green G  
(light absorbing compound used in  
optical sheet used for front panel of optical  
imaging device)

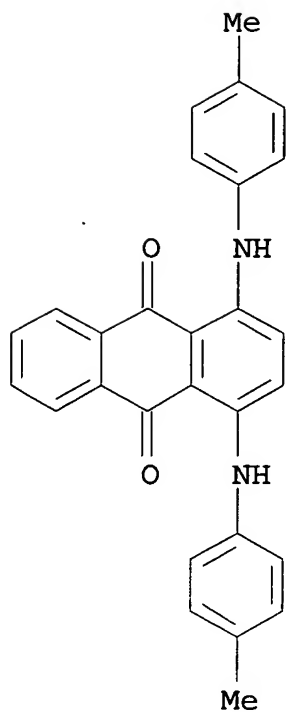
RN 81-39-0 HCAPLUS

CN 3H-Naphtho[1,2,3-de]quinoline-2,7-dione, 3-methyl-6-[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)

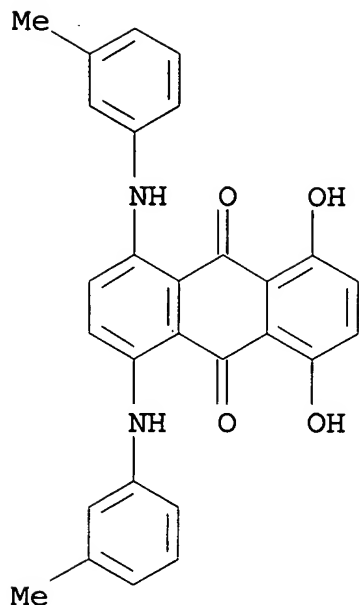


RN 128-80-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)



RN 99258-95-4 HCAPLUS  
CN 9,10-Anthracenedione,  
1,4-dihydroxy-5,8-bis[(3-methylphenyl)amino] -  
(9CI) (CA INDEX NAME)



IC ICM G02B005-22  
ICS G02B001-11; G09F009-00

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
Section cross-reference(s): 74

ST optical sheet front panel display **device**

IT Optical imaging **devices**  
Optical instruments  
(optical sheet used for front panel of optical imaging **device**)

IT Acrylic polymers, uses  
(optical sheet used for front panel of optical imaging **device**)

IT 81-39-0, Macrolex red 5B 128-80-3, Diaresin  
green C 4702-90-3, Macrolex yellow 3G 61951-89-1, C.I.

Solvent  
Violet 36 99258-95-4, Macrolex green G  
(**light absorbing** compound used in  
**optical** sheet used for front panel of **optical**  
imaging **device**)

L34 ANSWER 13 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:685134 HCAPLUS

DOCUMENT NUMBER: 129:308548

TITLE: Optical **recording** medium

INVENTOR(S): Tamura, Shinichiro

PATENT ASSIGNEE(S): Sony Corporation, Japan  
 SOURCE: PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 9845838	A1	19981015	WO 1998-JP1627
1998 0408 W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG TW 468180 B 20011211 TW 1998-87105096			
CA 2285558	AA	19981015	CA 1998-2285558
AU 9867473	A1	19981030	AU 1998-67473
AU 744048	B2	20020214	
BR 9808492	A	20000523	BR 1998-8492

EP 1017045                      A1            20000705            EP 1998-912730

1998

0408

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT,  
FI

MX 9909112                      A            20000228            MX 1999-9112

1999

1005

PRIORITY APPLN. INFO.:

JP 1997-89761                      A

1997

0408

WO 1998-JP1627                      W

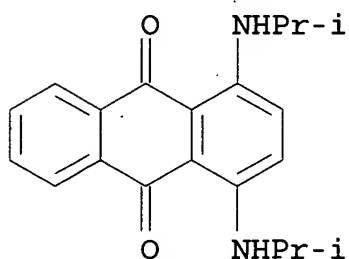
1998

0408

AB    An optical **recording** medium comprises a **recording** layer containing an organic pigment and a reflective layer successively formed on a light transmitting substrate and effecting, when a laser beam is incident from the light transmitting substrate side to **record** and reproduce information signals, wherein a **light absorbing** layer which transmits the laser beam but **absorbs** a **light** whose wavelength is within the wavelength region of the **light absorbed** by the **recording** layer is provided on the laser beam application side rather than the reflective layer. The light deterioration of the **recording** layer containing the organic pigment is caused by a natural light whose wavelength exists in the wavelength region of the **light absorbed** by the organic pigment. In an optical **recording** medium having the **light absorbing** layer, a natural **light** incident from the reflective layer side is intercepted by the reflective layer and so does not impinge on the **recording** layer. On the other hand, a natural light whose wavelength is within the wavelength region of the **light absorbed** by the organic pigment among natural lights incident from the substrate side is **absorbed** by the **light absorbing**

layer and attenuated, and so the dose of light impinging on the recording layer can be suppressed.

IT 14233-37-5, Sumiplast Blue OA  
(optical recording medium having  
light-absorbing layer on substrate)  
RN 14233-37-5 HCAPLUS  
CN 9,10-Anthracenedione, 1,4-bis[(1-methylethyl)amino] - (9CI) (CA  
INDEX NAME)



IC ICM G11B007-24  
ICS B41M005-26  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
ST optical recording laser beam absorber pigment  
IT Optical recording materials  
(optical recording medium having light-  
absorbing layer on substrate)  
IT Polycarbonates, uses  
(optical recording medium having light-  
absorbing layer on substrate)  
IT 14233-37-5, Sumiplast Blue OA 214405-29-5, LQC 4314 RED  
(optical recording medium having  
light-absorbing layer on substrate)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE  
FOR THIS RECORD. ALL CITATIONS

AVAILABLE

IN THE RE FORMAT

L34 ANSWER 14 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1996:548345 HCAPLUS  
DOCUMENT NUMBER: 125:181323  
TITLE: Alignment mark for resist pattern formation  
and manufacture of semiconductor  
device using same  
INVENTOR(S): Nomura, Hiroshi; Tokawa, Iwao; Kumagai,  
Akitoshi

PATENT ASSIGNEE(S) : Tokyo Shibaura Electric Co, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

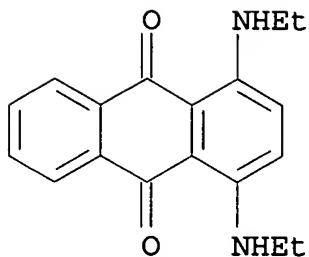
PATENT NO.	KIND	DATE	APPLICATION NO.
JP 08153676	A2	19960611	JP 1995-82090
JP 3239976	B2	20011217	JP 1994-236255
			JP 1994-238032

AB The title mark comprises a substrate bearing gradation-having alignment mark regions, a metal layer-containing laminating film, and a light absorbing layer on the concave regions for absorbing partial alignment light with certain wavelength. Manufacture of the alignment mark and manufacture of semiconductor devices using the alignment mark for exposure are also claimed. The light absorbing layer may be made of a resist containing a dye for assuring the accurate alignment.

IT 6994-46-3  
 (incorporated in photoresist to form light absorbing layer for alignment mark)

RN 6994-46-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis(ethylamino)- (9CI) (CA INDEX NAME)



IC ICM H01L021-027  
ICS G03F009-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 76  
ST alignment mark light absorbing layer resist; semiconductor  
**device** manuf alignment mark  
IT Semiconductor **devices**  
(manufacture using alignment mark for exposure)  
IT Resists  
(photo-, alignment mark for resist pattern formation and  
manufacture  
of semiconductor **device**)  
IT 85-83-6 6994-46-3  
(incorporated in photoresist to form **light**  
**absorbing** layer for alignment mark)

L34 ANSWER 15 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1996:128381 HCAPLUS  
DOCUMENT NUMBER: 124:319070  
TITLE: Alicyclic epoxy resin compositions for  
photomoldings and cured products thereof  
INVENTOR(S): Isobe, Koji; Sasahara, Kazunori; Hinokuchi,  
Kazuhiko  
PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 07316262

A2

19951205

JP 1994-137885

1994

0530

PRIORITY APPLN. INFO.:

JP 1994-137885

1994

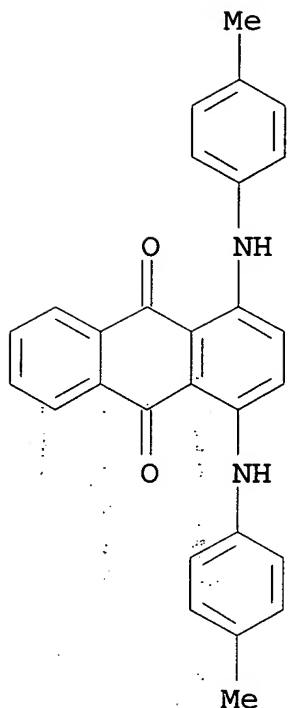
0530

AB The compns. contain alicyclic epoxy compds., metallocene compds., and peroxides and/or curing accelerators and optionally contain leveling agents and/or light-absorbing agents and are cured by exposing the compns. to light (e.g., laser beam) with wave length 400-1500 nm. Celloxide 4000 (limonene mono or diepoxide) 15, 3,4-epoxycyclohexylmethyl(3,4-epoxy)cyclohexane carboxylate homopolymer (Celloxide 2021) 85, Irgacure 261 4, and Kayacumene H 2 parts were mixed and cured with laser beam (680 nm) using a photomolding **device** to give a cured molding with precision 3.0%.

IT 128-80-3, Kayaset Green A-B  
(**light absorber**; alicyclic epoxy resin  
compns. for photomoldings containing)

RN 128-80-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(4-methylphenyl)amino] - (9CI) (CA  
INDEX NAME)



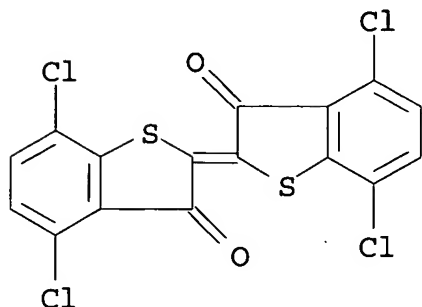
IC ICM C08G059-18  
 ICS B29C035-08; B29C067-00; C08G059-68; C08L063-00; G03F007-029;  
 G03F007-038  
 ICI B29K105-24  
 CC 38-2 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37  
 IT 128-80-3, Kayaset Green A-B 94765-77-2, Kayaset Black KR  
 (light absorber; alicyclic epoxy resin  
 compns. for photomoldings containing)

L34 ANSWER 16 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1995:563504 HCAPLUS  
 DOCUMENT NUMBER: 122:326042  
 TITLE: Antireflection films  
 INVENTOR(S): Takamiya, Naoki; Nakao, Makoto; Yazawa,  
 Akira;  
 Wakabayashi, Atumi  
 PATENT ASSIGNEE(S): Sumitomo Cement Co., Ltd., Japan  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DE 4430859	A1	19950323	DE 1994-4430859
1994			
0831			
DE 4430859	C2	20020516	
JP 3262248	B2	20020304	JP 1994-226100
1994			
0829			
CN 1102885	A	19950524	CN 1994-115611
1994			
0830			
CN 1057611	B	20001018	
NL 9401408	A	19950316	NL 1994-1408
1994			
0831			
NL 194687	B	20020701	
NL 194687	C	20021104	
PRIORITY APPLN. INFO.:			JP 1993-240473 A
1993			
0831			
AB	Multilayered antireflection films, especially films for use with displays, comprise at least first and second transparent layers formed on a base material in which the first layer has a refractive index in the range 1.45-2.10 while the second has a refractive index $\geq 0.1$ less than that of the first and in which at least the first layer incorporates a light absorbing material. Use on display <b>devices</b> iss indicated.		
IT	14295-43-3, Thioindigo Bordeaux (multilayered antireflection films incorporating <b>light absorbing materials</b> )		
RN	14295-43-3 HCAPLUS		

CN Benzo[b]thiophen-3(2H)-one, 4,7-dichloro-2-(4,7-dichloro-3-oxobenzo[b]thien-2(3H)-ylidene)- (9CI) (CA INDEX NAME)



IC ICM G02B001-11

ICS B60K037-04

ICA H01J029-10; G09F009-35

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 74

IT 81-77-6, Indanthrone blue 147-14-8, Phthalocyanine blue 471-34-1, Calcium carbonate, uses 475-71-8 523-42-2, Cyanine blue 1306-23-6, Cadmium yellow, uses 1309-37-1, Red oxide, uses 1328-53-6, Phthalocyanine green 1344-28-1, Aluminum oxide, uses 1344-37-2, Chromium yellow 1344-48-5, Mercury sulfide 1345-05-7, Lithopone 1345-16-0, Cobalt blue 3049-71-6 4051-63-2 4424-06-0, Perinone orange 5045-40-9, Isoindolinone yellow 5521-31-3, Perylene maroon 6424-77-7, Perylene scarlet 7631-86-9, Silica, uses 7727-43-7, Barium sulfate 7778-18-9, Calcium sulfate 8011-87-8, Cobalt green 10101-66-3, Manganese violet 11118-57-3, Chromium oxide 12240-15-2, Prussian blue 12656-85-8, Molybdate orange 13007-86-8, Aniline black 13530-65-9, Zinc chromate 14295-43-3, Thioindigo Bordeaux 15680-42-9, Copper azomethine yellow 30125-47-4, Quinophthalone yellow 36888-99-0, Isoindoline yellow 51274-00-1, Iron oxide yellow 57455-37-5, Ultramarine blue 58339-34-7, Cadmium red 60650-95-5, Titanium yellow 65666-57-1, Astrazon yellow 67800-72-0, Chrome green 68993-80-6, Alkali blue 71538-26-6, Madder lake 82196-89-2, Cobalt violet 83712-59-8, Cerulean blue 95145-37-2, Iron black 158707-32-5, Cyanine blue BNRS 163662-62-2, Basic red carbonate 163663-12-5, Nickel nitroso yellow 163663-24-9, Smaragdite green 215247-95-3, Dioxazine violet

(multilayered antireflection films incorporating light absorbing materials)

L34 ANSWER 17 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1993:659661 HCAPLUS  
DOCUMENT NUMBER: 119:259661  
TITLE: Optical **recording** media containing  
1-aminoanthraquinones with laser beam  
sensitivity  
INVENTOR(S): Nakamura, Yoshinori; Eguchi, Hiroshi  
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
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	JP 05193264	A2	19930803	JP 1992-27509

1992

0120

PRIORITY APPLN. INFO.:

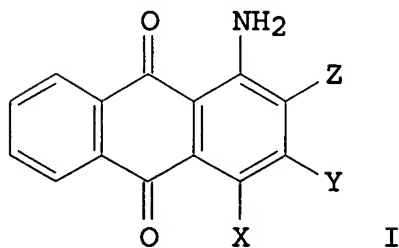
JP 1992-27509

1992

0120

OTHER SOURCE(S):  
GI

MARPAT 119:259661



AB Optical **recording** media comprising a substrate and a **recording** layer containing the title compds. I [X = NH<sub>2</sub>, OH; Y, Z = H, NHR, SR, OR, OSO<sub>2</sub>R, cyano, halo; R = (un)substituted alkyl, cycloalkyl, allyl, aryl, vinyl, aralkyl, heterocyclyl, alkoxyalkyl, aralkylaloxylalkyl, oxycarbonylalkyl, carboxyalkyl]

as

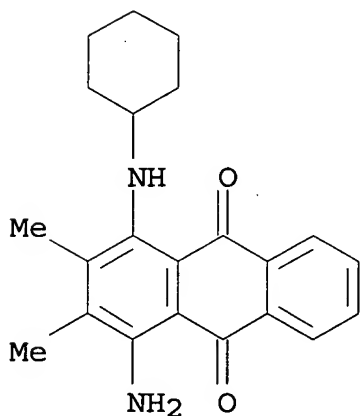
**light-absorbing** substances are claimed. Optical **recording** media have sensitivity to laser beam of approx. 520 nm and are excellent in storage stability.

IT 3226-09-3 3485-93-6 62956-44-9

(optical **recording** media containing, with laser beam sensitivity)

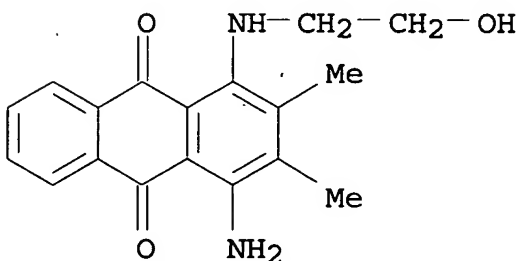
RN 3226-09-3 HCAPLUS

CN 9,10-Anthracenedione, 1-amino-4-(cyclohexylamino)-2,3-dimethyl- (9CI) (CA INDEX NAME)



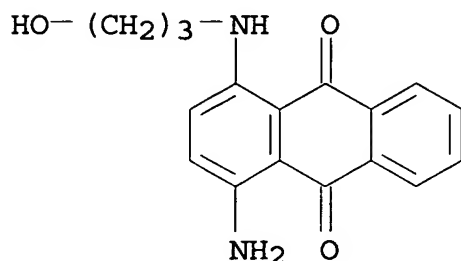
RN 3485-93-6 HCAPLUS

CN 9,10-Anthracenedione, 1-amino-4-[(2-hydroxyethyl)amino]-2,3-dimethyl- (9CI) (CA INDEX NAME)



RN 62956-44-9 HCAPLUS

CN 9,10-Anthracenedione, 1-amino-4-[(3-hydroxypropyl)amino] - (9CI)  
(CA INDEX NAME)

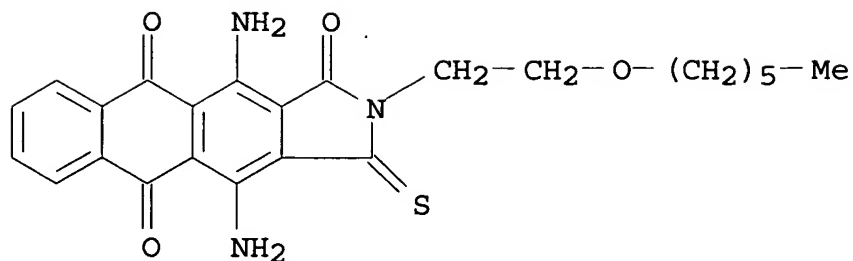


IC ICM B41M005-26  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST optical **recording** medium aminoanthraquinone dye;  
anthraquinone amino optical **recording** medium  
IT Dyes, anthraquinone  
(aminoanthraquinones, laser beam-sensitive optical  
**recording** media containing)  
IT **Recording** materials  
(optical, aminoanthraquinone dyes for, laser beam-sensitive)  
IT 81-62-9 **3226-09-3** 3226-13-9 **3485-93-6**  
5355-87-3, 1-Amino-2,3,4-trichloroanthraquinone 6375-37-7,  
1-Amino-3-bromoanthraquinone 15102-96-2 **62956-44-9**  
(**optical recording** media containing, with laser  
beam sensitivity)

L34 ANSWER 18 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1991:92011 HCAPLUS  
DOCUMENT NUMBER: 114:92011  
TITLE: Erasable optical **recording** medium  
INVENTOR(S): Kanno, Toshiyuki; Ueno, Naoyuki; Kondo,  
Seiji;  
Osada, Taiji; Uematsu, Yoshiko  
PATENT ASSIGNEE(S): Olympus Optical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

USHA SHRESTHA EIC 1700 REM 4B28



IC ICM B41M005-26  
ICS G02F001-137; G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST erasable optical **recording** medium; polypeptide liq crystal  
IT **Recording** materials  
(optical, erasable, containing polypeptide and **light-absorbing** compds.)  
IT 87314-12-3 **90155-59-2** 95736-65-5 131838-10-3  
131838-14-7 131899-99-5 132014-57-4 132036-03-4  
(erasable **optical recording** material containing)

L34 ANSWER 19 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1991:92007 HCAPLUS  
DOCUMENT NUMBER: 114:92007  
TITLE: Erasable optical **recording** medium  
INVENTOR(S): Kanno, Toshuki; Ueno, Naoyuki; Kondo, Seiji; Osada, Taiji; Kanehira, Atsushi; Takahashi, Hideji  
PATENT ASSIGNEE(S): Olympus Optical Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
JP 02136289	A2	19900524	JP 1988-289733

1988

1116  
US 5019476 A 19910528 US 1989-435946  
1989  
1113  
PRIORITY APPLN. INFO.: JP 1988-289733 A  
1988  
1116  
JP 1988-292461 A  
1988  
1121  
JP 1988-333500 A  
1988  
1228

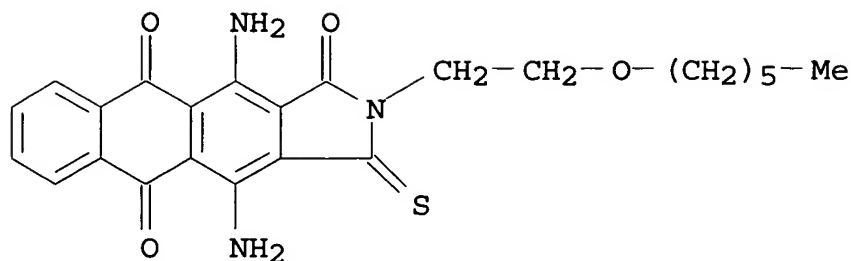
AB A **recording** layer on a transparent substrate contains a polymer compound capable of undergoing changes in the phys. property

(mol. rotation, orientation etc.) of its side chain(s) and a dye **absorbing a recording light**, which induces interaction between the side chain of the polymer and the dye to effect changes in chemical and phys. properties (glass transition temperature, m.p., etc.) in the **recording** layer by which writing and erasing of information is possible.

IT 90155-59-2  
(erasable **optical recording** material containing)

RN 90155-59-2 HCAPLUS

CN 1H-Naphth[2,3-f]isoindole-1,5,10-trione, 4,11-diamino-2-[2-(hexyloxy)ethyl]-2,3-dihydro-3-thioxo- (9CI) (CA INDEX NAME)



IC ICM B41M005-26  
ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST erasable optical **recording** medium

IT **Recording** materials  
(optical, erasable, interaction of polymer side chain with dye in)

IT 88417-76-9 **90155-59-2** 111291-00-0 132011-02-0  
132244-48-5 132244-49-6 132244-50-9 132244-51-0  
132244-52-1 132244-54-3 132244-56-5  
(erasable **optical recording** material containing)

IT 9011-14-7, PMMA  
(styrene-modified, erasable optical **recording** material containing)

L34 ANSWER 20 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1990:14321 HCAPLUS

DOCUMENT NUMBER: 112:14321

TITLE: Erasable optical **recording** medium containing photochromic materials

INVENTOR(S): Sato, Yoshikazu; Kuroda, Masami; Kosho, Noboru

PATENT ASSIGNEE(S): Fuji Electric Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 01028631

A2

19890131

JP 1987-184759

1987

0724

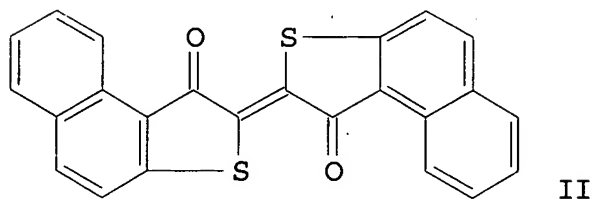
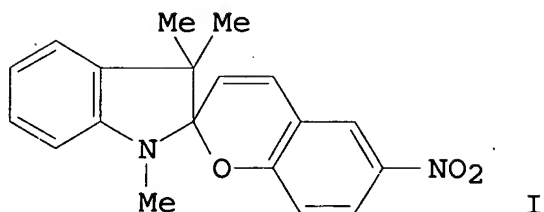
PRIORITY APPLN. INFO.:

JP 1987-184759

1987

0724

GI



AB The title optical **recording** medium contains photochromic derivs. wherein one **light-absorbing** region of a photochromic derivative and one **light-absorbing** region of the other photochromic derivative are overlapped each other,

and other **light-absorbing** regions are not overlapped. A **recording** medium containing I [ $\lambda(\text{discoloration}) = 365 \text{ nm}$ ;  $\lambda(\text{coloration}) = 550 \text{ nm}$ ] and II [ $\lambda(\text{discoloration}) = 490$ ;  $\lambda(\text{coloration}) = 550$ ] showed  $\approx (00)$ ,  $(11)$ ,  $(01)$  or  $(10)$  type bit signal.

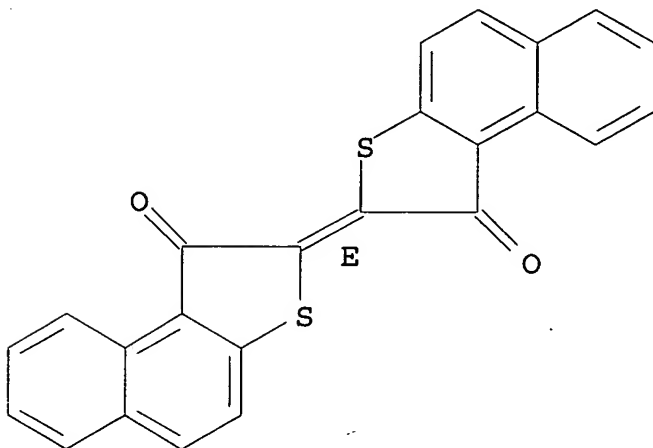
IT 124170-20-3

(optical **recording** medium containing spiropyran and, as photochromic substances)

RN 124170-20-3 HCAPLUS

CN Naphtho[2,1-b]thiophen-1(2H)-one, 2-(1-oxonaphtho[2,1-b]thien-2(1H)-ylidene)-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IC ICM G03C001-733  
ICS B41M005-26; C09K009-00; G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST photochromic substances optical **recording** medium  
IT Photochromic substances  
(optical **recording** medium containing)  
IT **Recording** materials  
(optical, containing multiple photochromic substances)  
IT **124170-20-3**  
(optical **recording** medium containing spiropyran and, as photochromic substances)  
IT 1498-88-0  
(optical **recording** medium containing thioindigo and, as photochromic substances)

L34 ANSWER 21 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1989:634331 HCAPLUS  
DOCUMENT NUMBER: 111:234331  
TITLE: Polyurethane compositions containing near-infrared absorbers  
INVENTOR(S): Ito, Naoto; Nishizawa, Isao; Sasagawa, Katsuyoshi  
PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
JP 01011153	A2	19890113	JP 1987-165208

1987

0703

JP 2590109 B2 19970312  
 PRIORITY APPLN. INFO.: JP 1987-165208

1987

0703

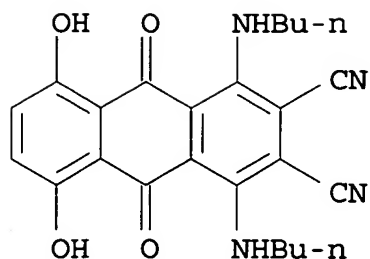
OTHER SOURCE(S): MARPAT 111:234331

AB Title compns., useful in energy exchange **devices**, laser-based **recording devices**, electronic apparatus control systems, etc., are prepared by mixing compds. containing  $\geq 2$  isocyanate groups with compds. containing  $\geq 2$  SH and/or OH groups and near-IR absorbers (e.g., naphthalocyanines, phthalocyanines, or anthraquinones). Pentaerythritol tetrakis(3-mercaptopropionate) 122, m-xylylene diisocyanate 94, a naphthalocyanine derivative (containing 4 pentyl and 1 phenyltin group) 2, and dibutyltin dilaurate 0.1 part were mixed, added to a mold, heated from 45° to 100° during 13 h, and cooled to give a **light** yellow lens which **absorbed light** of wavelength 700-850 nm and had good weather resistance.

IT 109144-53-8  
 (near-IR absorbers, polyurethanes containing, for **optical shielding devices**)

RN 109144-53-8 HCAPLUS

CN 2,3-Anthracenedicarbonitrile,  
 1,4-bis(butylamino)-9,10-dihydro-5,8-dihydroxy-9,10-dioxo- (9CI) (CA INDEX NAME)



IC ICM C08L075-04  
 ICS C08G018-08; C08K005-08; C08K005-34  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 74  
 IT Urethane polymers, uses and miscellaneous  
 (moldings, containing near-IR absorbers, for shielding  
**devices**)  
 IT Optical filters  
 (polyurethanes containing near-IR absorbers as, for shielding  
**devices**)  
 IT 112453-89-1 121912-96-7 121912-97-8  
 (moldings, containing near-IR absorbers, for shielding  
**devices**)  
 IT **109144-53-8** 121912-98-9 122018-77-3 122918-94-9  
 124011-35-4  
 (near-IR absorbers, polyurethanes containing, for **optical**  
 shielding **devices**)

L34 ANSWER 22 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:66959 HCAPLUS

DOCUMENT NUMBER: 110:66959

TITLE: Phthaloylenephthalimide **light-**  
**absorbing** material in optical  
**recording** material with high  
 sensitivity and storage stability

INVENTOR(S): Maeda, Shuichi; Kurose, Yutaka; Ozawa, Tetsuo  
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd.,  
 Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

JP 62152785

A2

19870707

JP 1985-292582

1985

1227

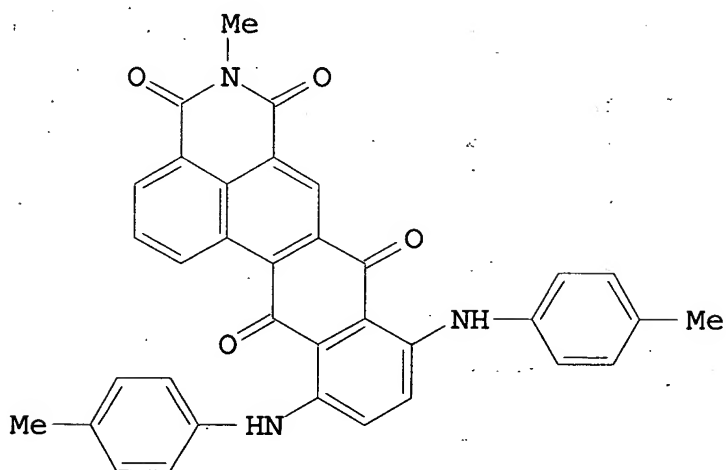
PRIORITY APPLN. INFO.:

JP 1985-292582

1985

1227

GI



I

AB The title material comprises a **recording** layer containing a substrate and a 3,4-phthaloylnaphthalimide-type **light-absorbing** substance. The material shows high sensitivity to laser beam irradiation and good preservation stability.

Thus, I

obtained from acenaphthene and 3,6-dichlorophthalic anhydride was heated at 150-200°, 2 + 10<sup>-5</sup> torr and vacuum evaporated onto a PMMA plate to form a 1900-Å film, which was irradiated with a semiconductor laser beam showing high sensitivity and preservation stability.

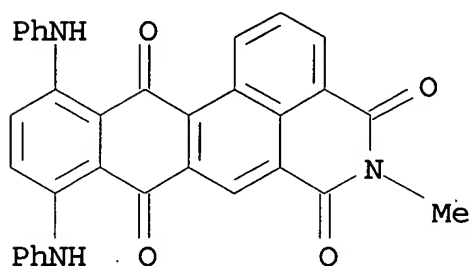
IT 22245-77-8 22245-78-9 22245-80-3  
22246-28-2 22246-29-3 22246-30-6

22246-31-7 22246-32-8 22246-33-9  
115895-68-6 115895-69-7 115895-70-0  
115895-71-1 115895-72-2 115895-73-3  
115895-74-4 115919-66-9

(optical recording materials containing, for  
laser beam irradiation, with high sensitivity and storage  
stability)

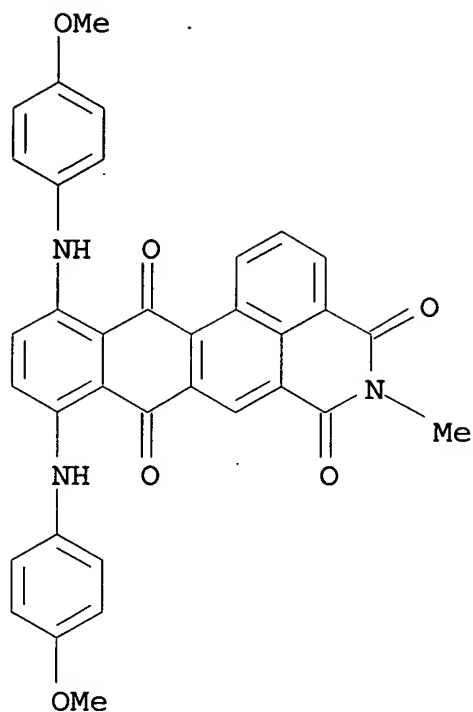
RN 22245-77-8 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-methyl-9,12-bis(phenylamino)- (9CI) (CA INDEX NAME)



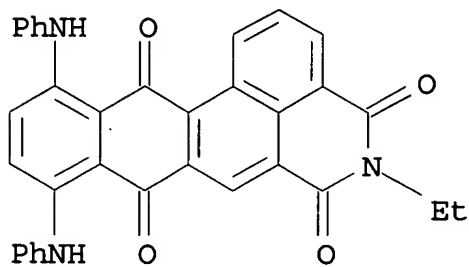
RN 22245-78-9 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis[(4-methoxyphenyl)amino]-5-methyl- (9CI) (CA INDEX NAME)



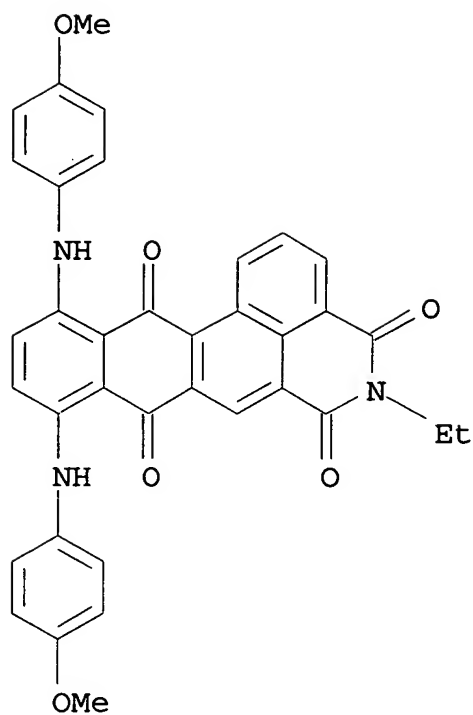
RN 22245-80-3 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-ethyl-9,12-bis(phenylamino)- (9CI) (CA INDEX NAME)



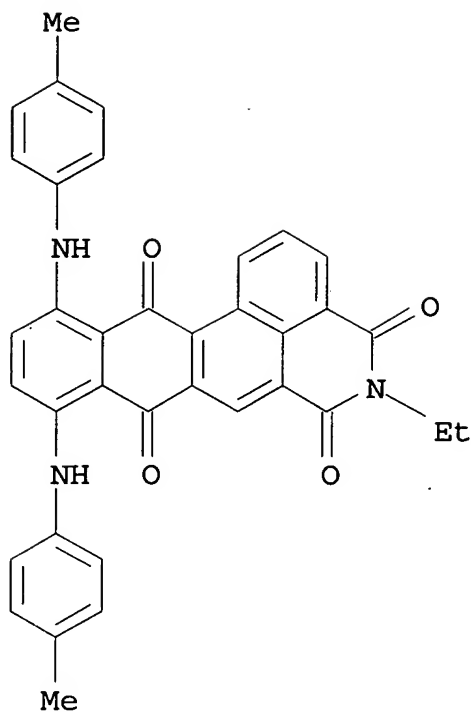
RN 22246-28-2 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-ethyl-9,12-bis[(4-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)



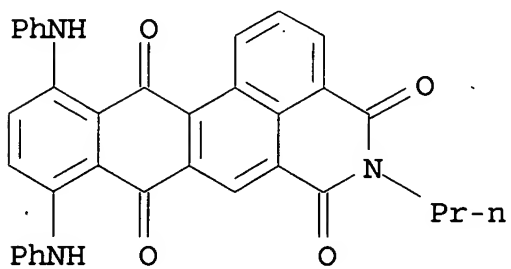
RN 22246-29-3 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-ethyl-9,12-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



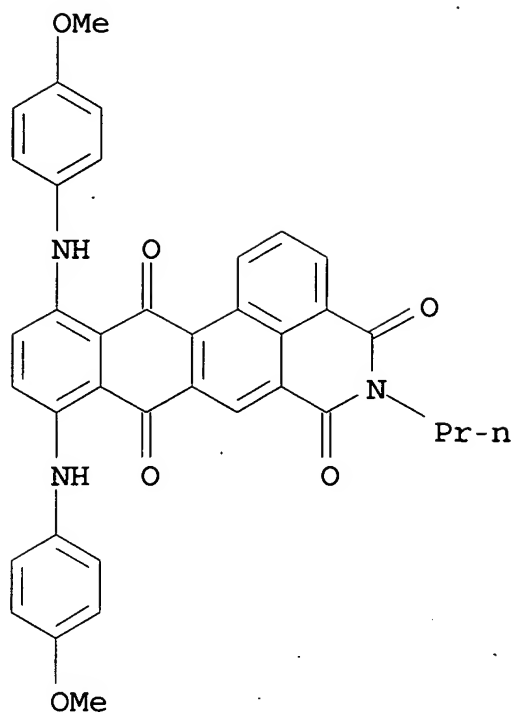
RN 22246-30-6 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis(phenylamino)-5-propyl- (9CI) (CA INDEX NAME)



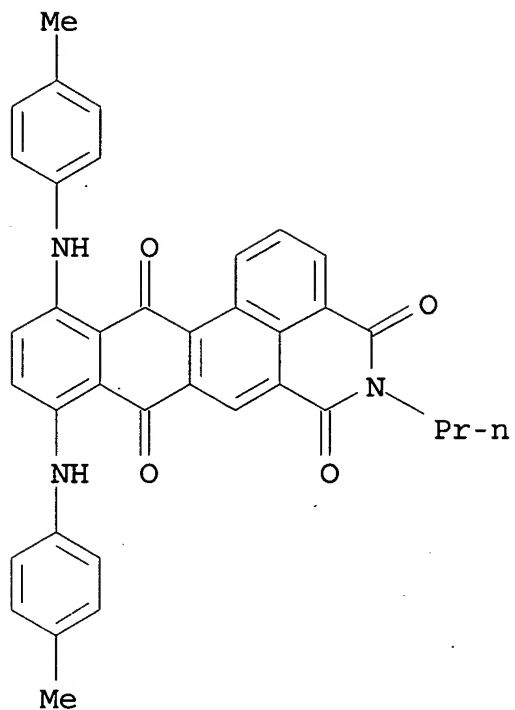
RN 22246-31-7 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis[(4-methoxyphenyl)amino]-5-propyl- (9CI) (CA INDEX NAME)



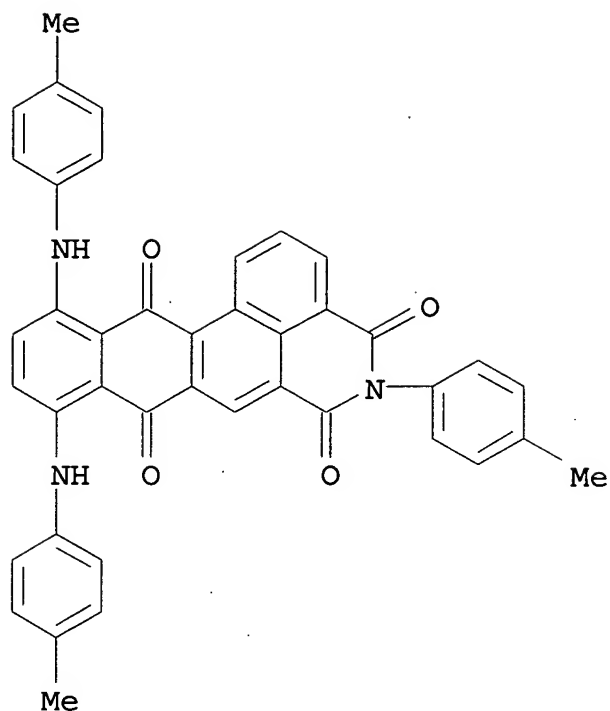
RN 22246-32-8 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis[(4-methylphenyl)amino]-5-propyl- (9CI) (CA INDEX NAME)

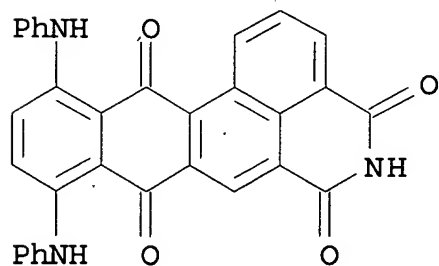


RN 22246-33-9 HCAPLUS

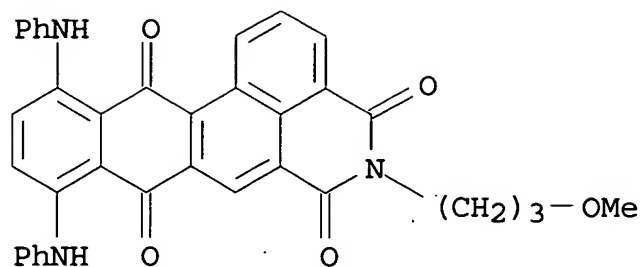
CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-(4-methylphenyl)-9,12-bis[(4-methylphenyl)amino]- (9CI) (CA  
INDEX NAME)



RN 115895-68-6 HCAPLUS  
 CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
 9,12-bis(phenylamino)- (9CI) (CA INDEX NAME)

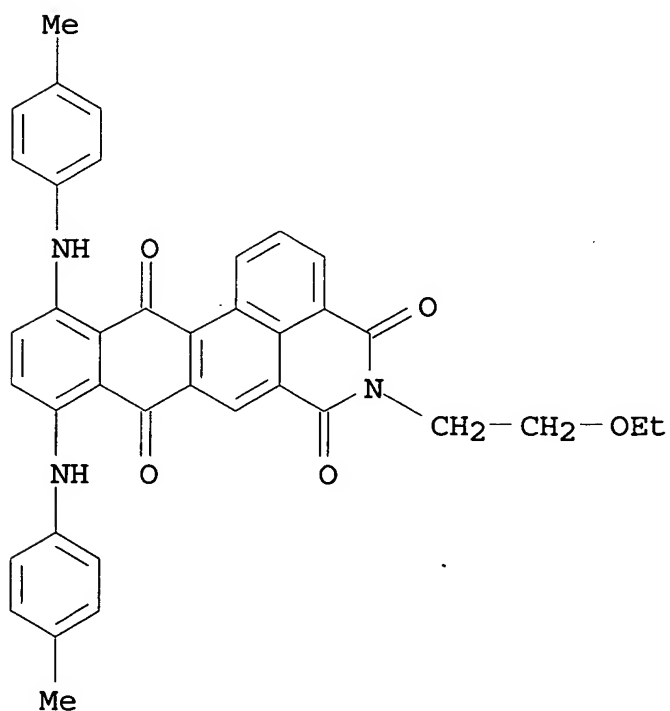


RN 115895-69-7 HCAPLUS  
 CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
 5-(3-methoxypropyl)-9,12-bis(phenylamino)- (9CI) (CA INDEX NAME)



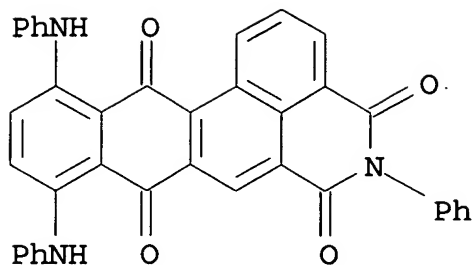
RN 115895-70-0 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-(2-ethoxyethyl)-9,12-bis[(4-methylphenyl)amino]-(9CI) (CA  
INDEX NAME)

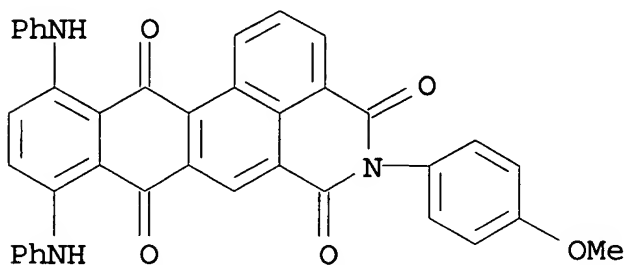


RN 115895-71-1 HCAPLUS

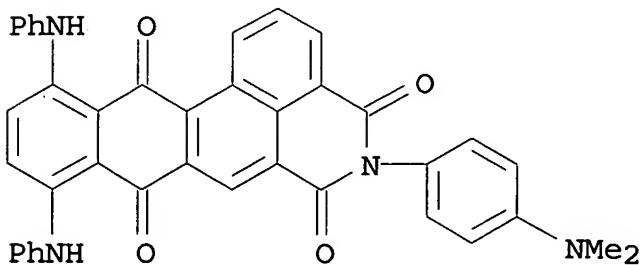
CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-phenyl-9,12-bis(phenylamino)-(9CI) (CA INDEX NAME)



RN 115895-72-2 HCAPLUS

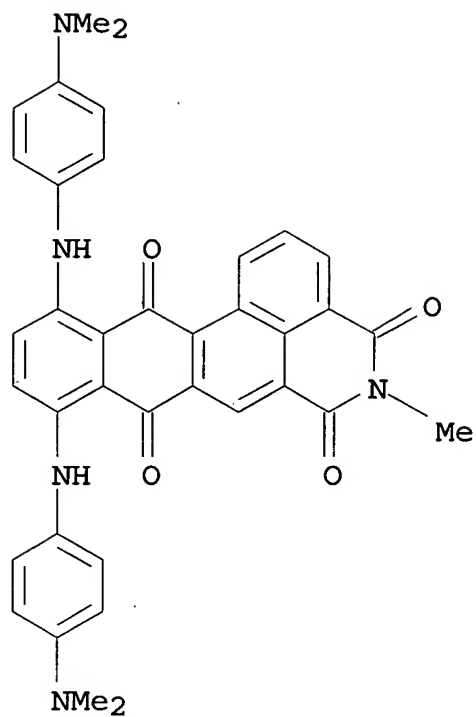
CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-(4-methoxyphenyl)-9,12-bis(phenylamino)- (9CI) (CA INDEX NAME)

RN 115895-73-3 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
5-[4-(dimethylamino)phenyl]-9,12-bis(phenylamino)- (9CI) (CA  
INDEX NAME)

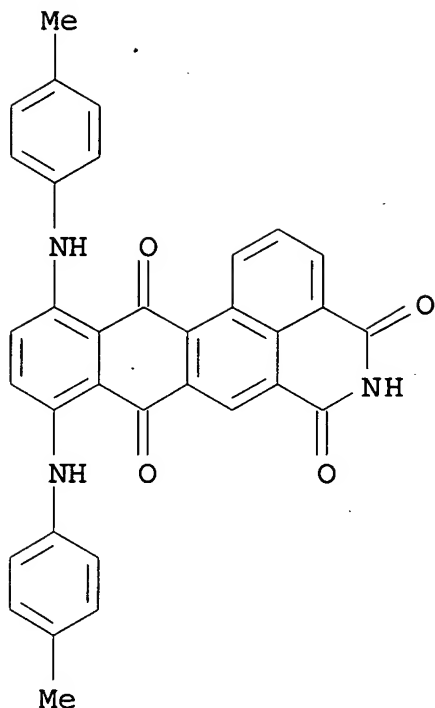
RN 115895-74-4 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis[[4-(dimethylamino)phenyl]amino]-5-methyl- (9CI) (CA  
INDEX NAME)



RN 115919-66-9 HCAPLUS

CN 4H-Anthra[3,2,1-de]isoquinoline-4,6,8,13(5H)-tetrone,  
9,12-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



IC ICM B41M005-26  
ICS G03C001-72; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST optical **recording** material sensitivity stability;  
phthaloylnaphthalimide laser beam **recording** material

IT **Recording** materials  
(optical, containing phthaloylnaphthalimide compds., for improved sensitivity to laser beams and storage stability)

IT 22245-77-8 22245-78-9 22245-80-3  
22246-28-2 22246-29-3 22246-30-6  
22246-31-7 22246-32-8 22246-33-9  
115895-68-6 115895-69-7 115895-70-0  
115895-71-1 115895-72-2 115895-73-3  
115895-74-4 115919-66-9  
(optical **recording** materials containing, for laser beam irradiation, with high sensitivity and storage stability)

IT 22245-72-3P 22245-74-5P 115895-75-5P 115895-76-6P  
(preparation and reaction of, phthaloylnaphthylimide compound for optical **recording** materials from)

IT 83-32-9 106-49-0, reactions 4466-59-5, 3,6-Dichlorophthalic anhydride  
(reaction of, phthaloylnaphthylimide compound for optical recording materials from)

L34 ANSWER 23 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1988:580512 HCAPLUS  
DOCUMENT NUMBER: 109:180512  
TITLE: Optical card containing chalcogen glass and dye layers  
INVENTOR(S): Nakatsui, Hisashi  
PATENT ASSIGNEE(S): Canon K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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JP 63074137	A2	19880404	JP 1986-218155

1986

0918

PRIORITY APPLN. INFO.: JP 1986-218155

1986

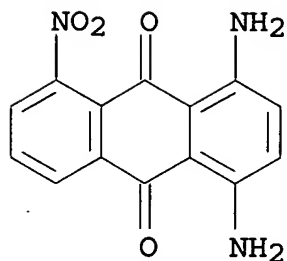
0918

AB An optical card for **recording** and retrieving information by laser beams is claimed wherein the card comprises a substrate layer, a dye layer as the **light**-dispersing/**absorbing** layer, a chalcogen glass layer as the light-reflecting layer, and a diffusive metal layer adjacent to the glass layer. A color-coded optical card having an improved readout efficiency was obtained.

IT 82-33-7  
(optical card containing, as **light-absorbing** layer)

RN 82-33-7 HCAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-5-nitro- (9CI) (CA INDEX NAME)



IC ICM G11B007-24  
 ICS B41M005-26; B42D015-02; G06K019-00  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 IT **Recording** materials  
 (optical, laser card, chalcogen and dye layers for)  
 IT 7440-38-2, Arsenic, uses and miscellaneous 7440-56-4,  
 Germanium,  
 uses and miscellaneous 7704-34-9, Sulfur, uses and  
 miscellaneous  
 7782-49-2, Selenium, uses and miscellaneous 13494-80-9,  
 Tellurium, uses and miscellaneous  
 (chalcogenide glass containing, optical **recording**  
 material from)  
 IT **82-33-7** 147-14-8 989-38-8 2465-27-2  
 (optical card containing, as **light-**  
**absorbing layer**)

L34 ANSWER 24 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1988:580511 HCAPLUS  
 DOCUMENT NUMBER: 109:180511  
 TITLE: Optical cord containing chalcogen glass and  
 dye layers  
 INVENTOR(S): Nakatsui, Hisashi  
 PATENT ASSIGNEE(S): Canon K. K., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 63074136

A2 19880404

JP 1986-218154

1986

0918

PRIORITY APPLN. INFO.:

JP 1986-218154

1986

0918

AB An optical card for writing and reading information by laser beams

is claimed wherein the card comprises a substrate layer, a chalcogen glass layer as the light-reflecting layer, and a dye layer as the **light-dispersing/absorbing** layer.

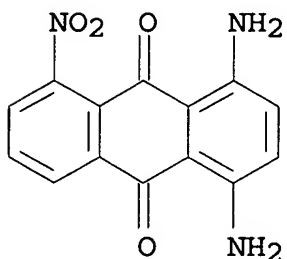
A color-coded optical card having an improved readout efficiency was obtained.

IT 82-33-7

(optical card containing, as **light-absorbing** layer)

RN 82-33-7 HCAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-5-nitro- (9CI) (CA INDEX NAME)



IC ICM G11B007-24

ICS B41M005-26; B42D015-02; G06K019-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **Recording** materials

(optical, laser card, chalcogen and dye layers for)

IT 7440-38-2, Arsenic, uses and miscellaneous 7440-56-4, Germanium,

uses and miscellaneous 7704-34-9, Sulfur, uses and miscellaneous

7782-49-2, Selenium, uses and miscellaneous 13494-80-9,

Tellurium, uses and miscellaneous

(chalcogenide glasses containing, optical recording material from)

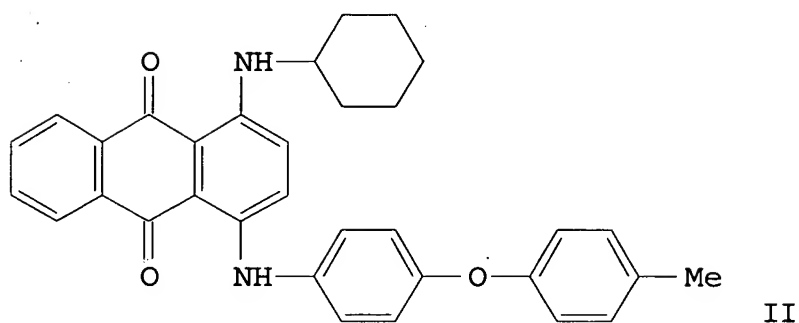
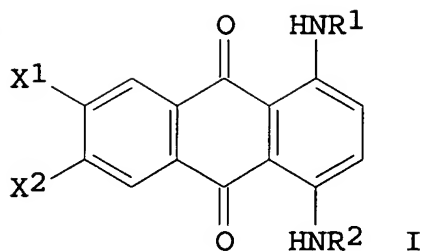
IT 82-33-7 147-14-8 989-38-8 2465-27-2  
(optical card containing, as light-absorbing layer)

L34 ANSWER 25 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1988:446325 HCAPLUS  
DOCUMENT NUMBER: 109:46325  
TITLE: Optical recording material  
containing anthraquinone dye  
INVENTOR(S): Schwander, Hansrudolf  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Ger. Offen., 9 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
1987	DE 3724819	A1	19880211	DE 1987-3724819
0727	CH 670723	A	19890630	CH 1986-3065
1986	FR 2602366	A1	19880205	FR 1987-10695
1987	JP 63037993	A2	19880218	JP 1987-189040
1987				
0730				
PRIORITY APPLN. INFO.:			CH 1986-3065	A
1986				

0730

GI



AB Optical **recording** materials are described which consist of a support, a **light-absorbing** layer containing an anthraquinone dye of the formula I ( $R_1$  = (un)substituted alkyl;

$R_2$  = (un)substituted aryl;  $X_1, X_2$  = H or halogen), and an optical light-reflecting layer. The materials are writable and readable with a He-Ne laser. Thus, a round glass wafer coated with an Al layer was coated with a mixture containing cellulose nitrate,

II, and

cyclohexanone, dried, exposed to a He-Ne laser to give pits, and the **recorded** information then read with a He-Ne laser to give signals with a high signal-to-noise ratio.

IT 10572-60-8 13731-65-2 18039-05-9  
 29205-95-6 53524-16-6 77946-99-7  
 77947-00-3 103328-43-4 107882-59-7  
 115218-63-8 115218-64-9 115333-04-5  
 115333-05-6 115333-06-7 115333-07-8  
 115333-08-9 115333-09-0 115333-10-3  
 115333-11-4 115333-12-5 115333-13-6  
 115333-14-7 115333-15-8 115333-16-9

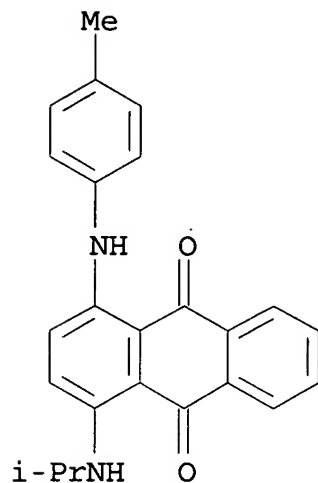
115333-17-0 115333-18-1 115333-19-2

115333-20-5 115333-21-6

(optical recording materials containing)

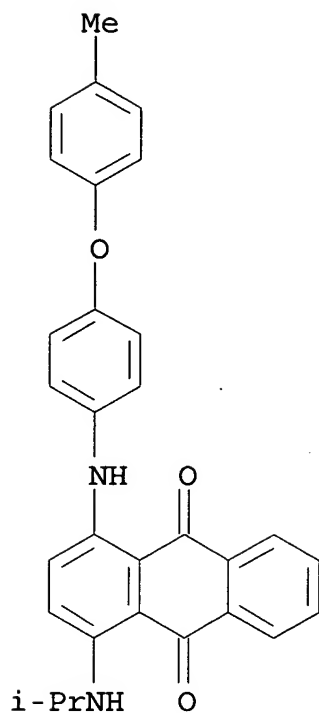
RN 10572-60-8 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1-methylethyl)amino]-4-[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



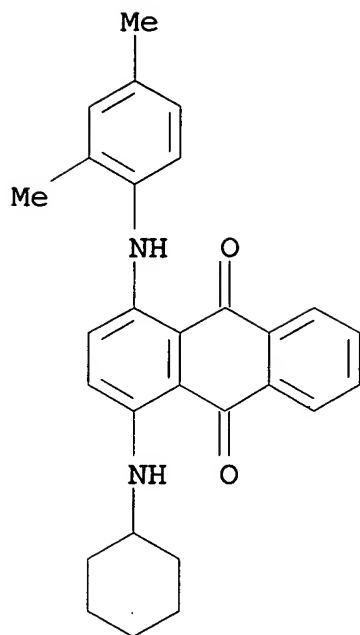
RN 13731-65-2 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1-methylethyl)amino]-4-[[4-(4-methylphenoxy)phenyl]amino]- (9CI) (CA INDEX NAME)



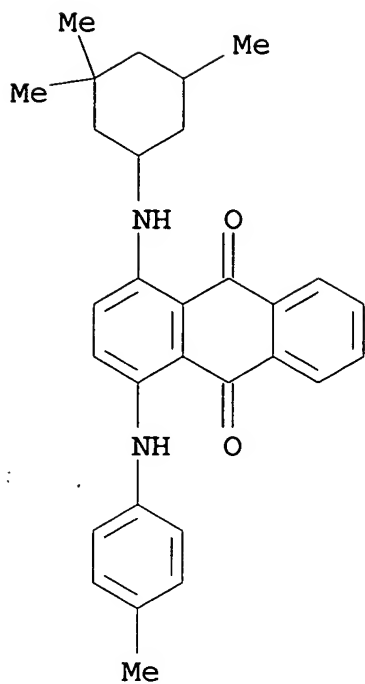
RN 18039-05-9 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(2,4-dimethylphenyl)amino]- (9CI) (CA INDEX NAME)



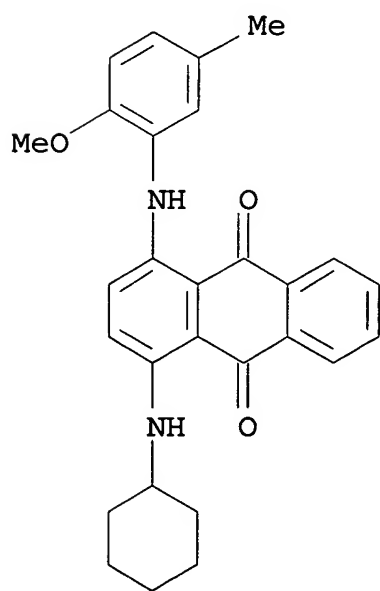
RN 29205-95-6 HCAPLUS

CN 9,10-Anthracenedione, 1-[(4-methylphenyl)amino]-4-[(3,3,5-trimethylcyclohexyl)amino]- (9CI) (CA INDEX NAME)



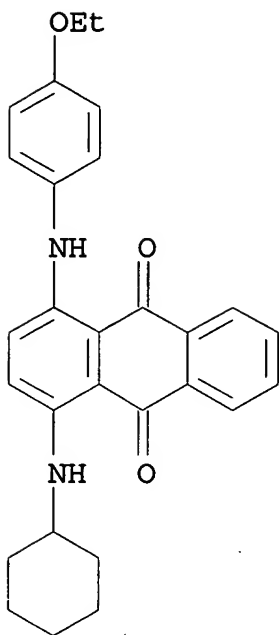
RN 53524-16-6 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(2-methoxy-5-methylphenyl)amino]- (9CI) (CA INDEX NAME)



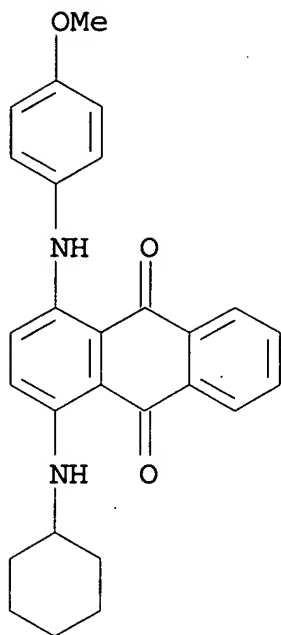
RN 77946-99-7 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(4-ethoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 77947-00-3 HCAPLUS

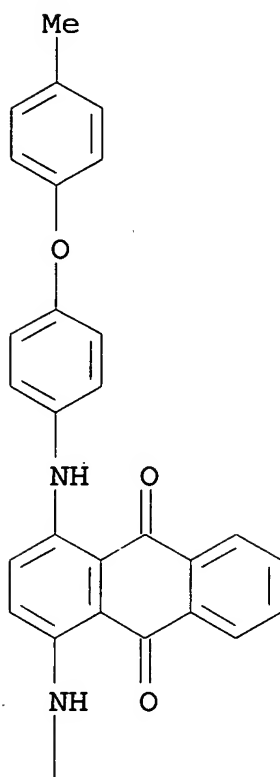
CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(4-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)



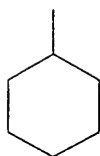
RN 103328-43-4 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[[4-(4-methylphenoxy)phenyl]amino] - (9CI) (CA INDEX NAME)

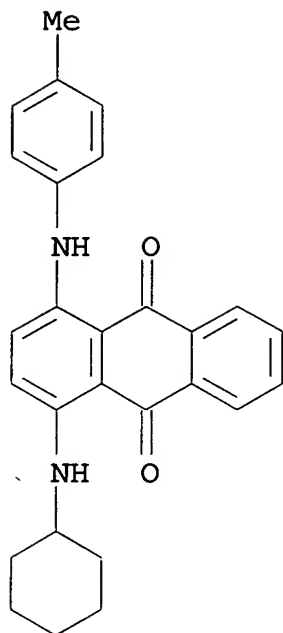
PAGE 1-A



PAGE 2-A



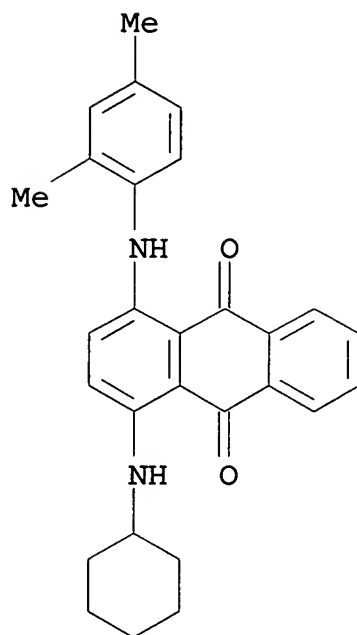
RN 107882-59-7 HCAPLUS  
CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)



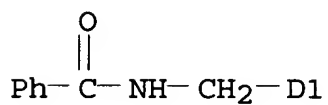
RN 115218-63-8 HCAPLUS

CN Benzamide, N-[[[4-(cyclohexylamino)-9,10-dihydro-9,10-dioxo-1-anthracenyl]amino]dimethylphenyl]methyl]- (9CI) (CA INDEX NAME)

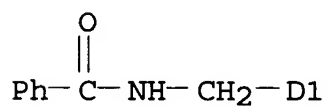
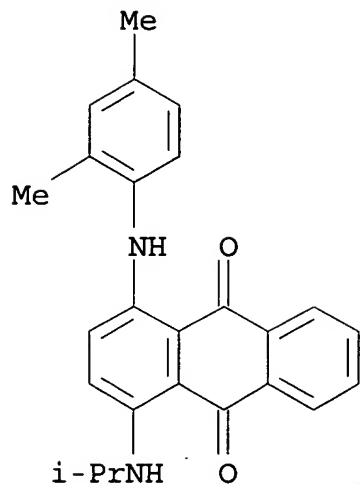
PAGE 1-A



PAGE 2-A

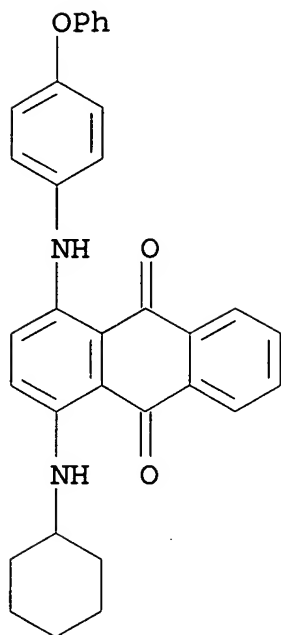


RN 115218-64-9 HCAPLUS  
 CN Benzamide,  
 N-[[[9,10-dihydro-4-[(1-methylethyl)amino]-9,10-dioxo-  
 1-anthracenyl]amino]dimethylphenyl]methyl]-2-oxo- (9CI) (CA  
 INDEX  
 NAME)



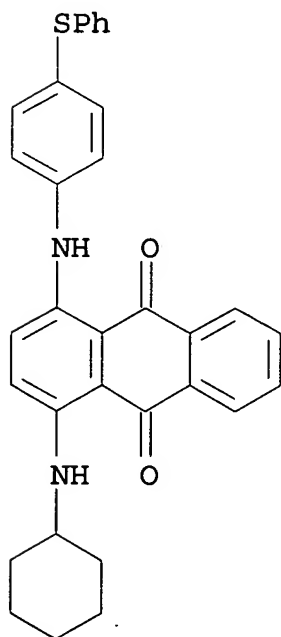
RN 115333-04-5 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



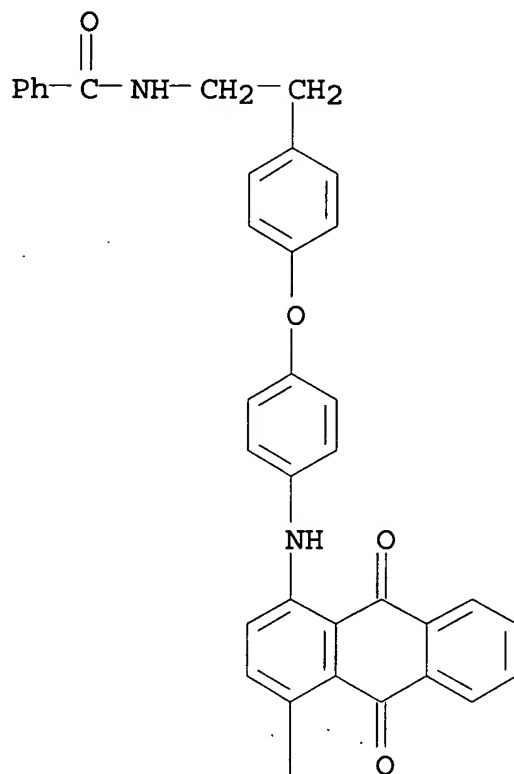
RN 115333-05-6 HCAPLUS

CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[[4-(phenylthio)phenyl]amino]- (9CI) (CA INDEX NAME)

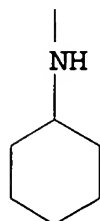


RN 115333-06-7 HCAPLUS  
CN Benzamide, N- [2- [4- [4- [[4- (cyclohexylamino) -9,10-dihydro-9,10-dioxo-1-anthracenyl]amino]phenoxy]phenyl]ethyl] - (9CI) (CA INDEX NAME)

PAGE 1-A

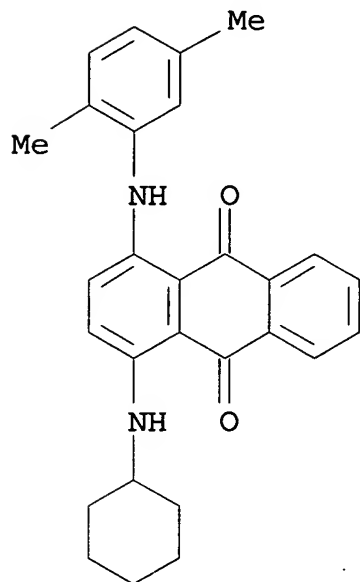


PAGE 2-A



RN 115333-07-8 HCAPLUS

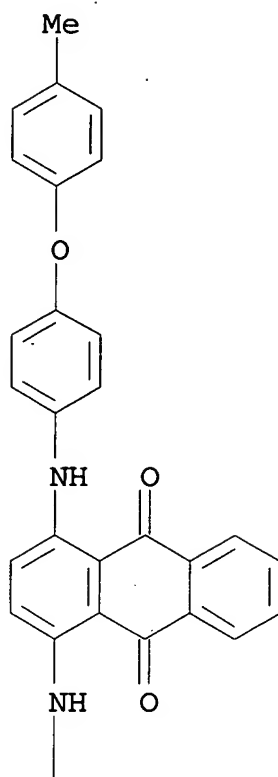
CN 9,10-Anthracenedione, 1-(cyclohexylamino)-4-[(2,5-dimethylphenyl)amino] - (9CI) (CA INDEX NAME)



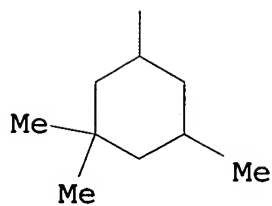
RN 115333-08-9 HCAPLUS

CN 9,10-Anthracenedione, 1-[[4-(4-methylphenoxy)phenyl]amino]-4-[(3,3,5-trimethylcyclohexyl)amino] - (9CI) (CA INDEX NAME)

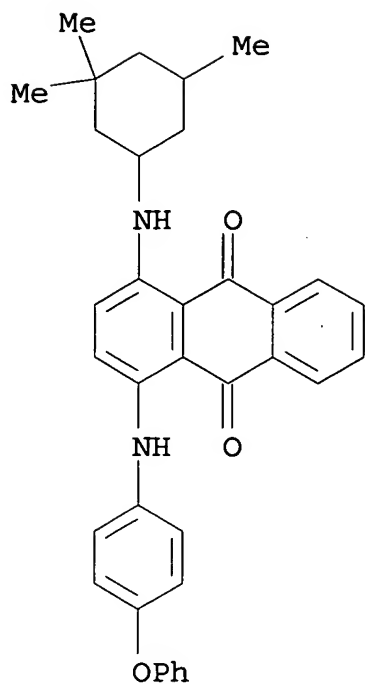
PAGE 1-A



PAGE 2-A

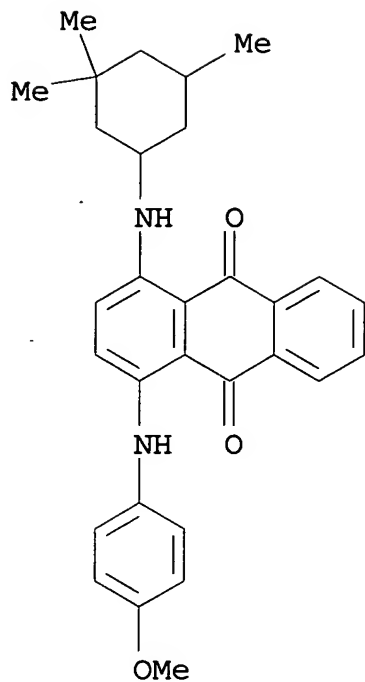


RN 115333-09-0 HCAPLUS  
CN 9,10-Anthracenedione, 1-[(4-phenoxyphenyl)amino]-4-[(3,3,5-trimethylcyclohexyl)amino]- (9CI) (CA INDEX NAME)



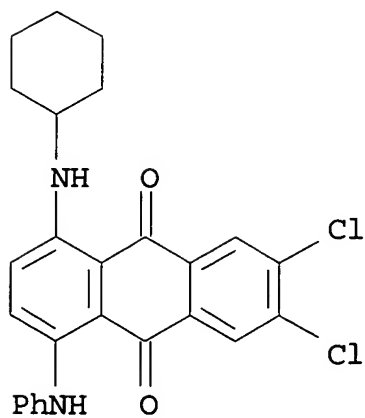
RN 115333-10-3 HCAPLUS

CN 9,10-Anthracenedione, 1-[(4-methoxyphenyl)amino]-4-[(3,3,5-trimethylcyclohexyl)amino]- (9CI) (CA INDEX NAME)



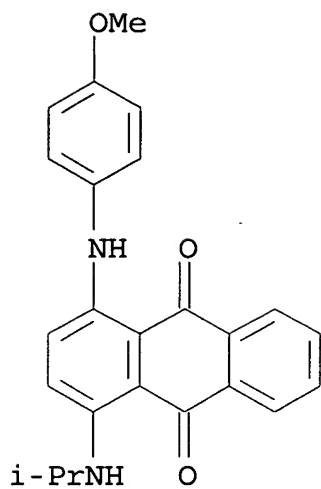
RN 115333-11-4 HCAPLUS

CN 9,10-Anthracenedione, 6,7-dichloro-1-(cyclohexylamino)-4-(phenylamino)- (9CI) (CA INDEX NAME)



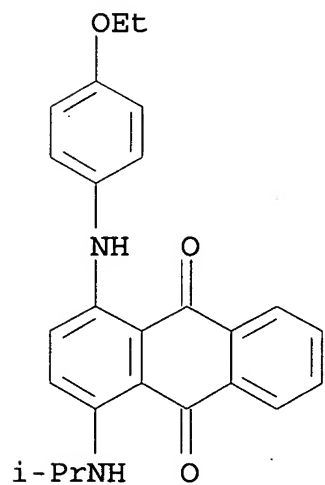
RN 115333-12-5 HCAPLUS

CN 9,10-Anthracenedione, 1-[(4-methoxyphenyl)amino]-4-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



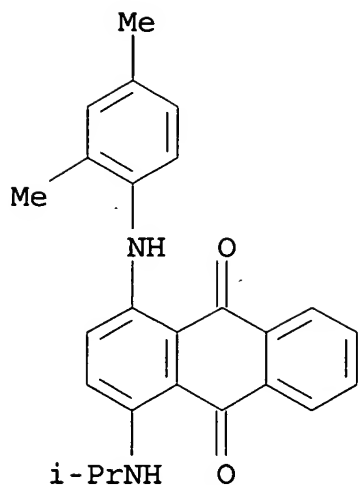
RN 115333-13-6 HCAPLUS

CN 9,10-Anthracenedione, 1-[(4-ethoxyphenyl)amino]-4-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



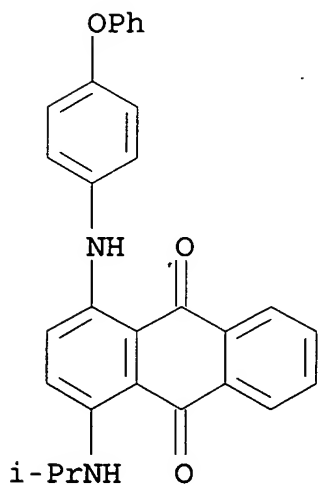
RN 115333-14-7 HCAPLUS

CN 9,10-Anthracenedione, 1-[(2,4-dimethylphenyl)amino]-4-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



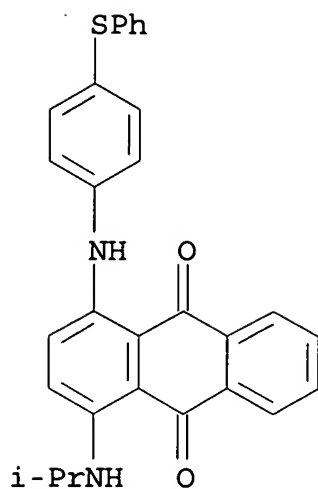
RN 115333-15-8 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1-methylethyl)amino]-4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



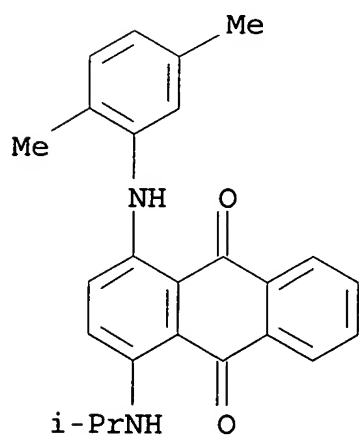
RN 115333-16-9 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1-methylethyl)amino]-4-[[4-(phenylthio)phenyl]amino]- (9CI) (CA INDEX NAME)



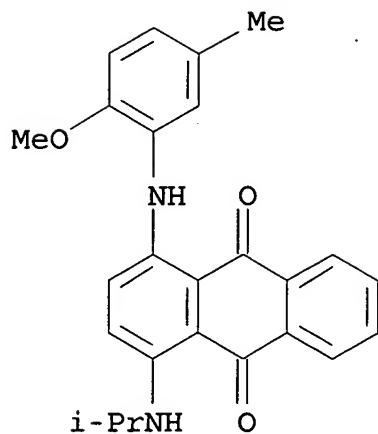
RN 115333-17-0 HCAPLUS

CN 9,10-Anthracenedione, 1-[(2,5-dimethylphenyl)amino]-4-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



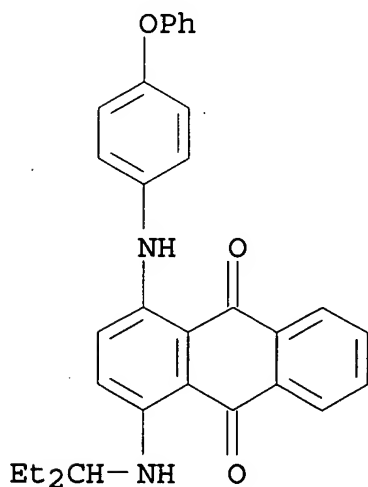
RN 115333-18-1 HCAPLUS

CN 9,10-Anthracenedione, 1-[(2-methoxy-5-methylphenyl)amino]-4-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



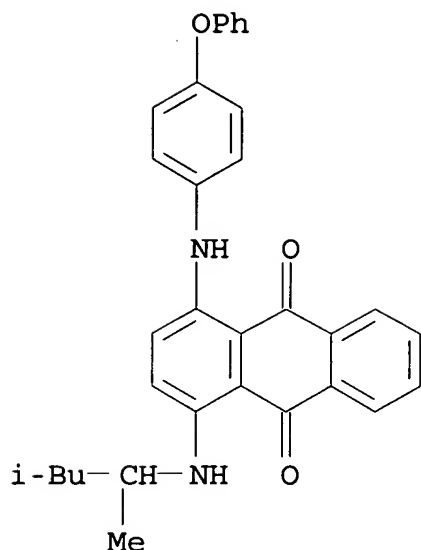
RN 115333-19-2 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1-ethoxypropyl)amino]-4-[(4-methoxyphenyl)amino]- (9CI) (CA INDEX NAME)

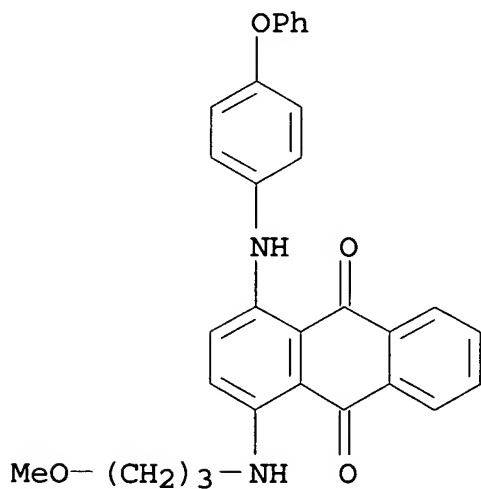


RN 115333-20-5 HCAPLUS

CN 9,10-Anthracenedione, 1-[(1,3-dimethylbutyl)amino]-4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



RN 115333-21-6 HCAPLUS  
 CN 9,10-Anthracenedione, 1-[(3-methoxypropyl)amino]-4-[(4-phenoxyphenyl)amino]- (9CI) (CA INDEX NAME)



IC ICM G11B007-24  
 ICA C09B001-26; C09B067-44; C09B067-46  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 41  
 ST aminoanthraquinone deriv dye optical **recording**  
 IT Dyes, anthraquinone

(optical recording materials containing)  
 IT Recording materials  
 (optical, diaminoanthraquinone derivative dyes for)  
 IT 10572-60-8 13731-65-2 18039-05-9  
 29205-95-6 53524-16-6 77946-99-7  
 77947-00-3 103328-43-4 107882-59-7  
 115218-63-8 115218-64-9 115333-04-5  
 115333-05-6 115333-06-7 115333-07-8  
 115333-08-9 115333-09-0 115333-10-3  
 115333-11-4 115333-12-5 115333-13-6  
 115333-14-7 115333-15-8 115333-16-9  
 115333-17-0 115333-18-1 115333-19-2  
 115333-20-5 115333-21-6  
 (optical recording materials containing)

L34 ANSWER 26 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1988:229635 HCAPLUS  
 DOCUMENT NUMBER: 108:229635  
 TITLE: Broad-spectrum, light-  
 absorbing coating for microelectronic  
 photolithography  
 INVENTOR(S): Barnes, Gregg A.; Brewer, Terry Lowell;  
 Flaim,  
 Tony D.; Moss, Mary G.  
 PATENT ASSIGNEE(S): Brewer Science, Inc., USA  
 SOURCE: Eur. Pat. Appl., 6 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
EP 233056	A2	19870819	EP 1987-301002
1987			
0204			
EP 233056	A3	19890913	
EP 233056	B1	19931215	
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE			
JP 59093448	A2	19840529	JP 1983-179499

1983

0929

JP 06012452 B4 19940216  
JP 09120163 A2 19970506 JP 1996-230097

1983

0929

US 4910122 A 19900320 US 1984-638258

1984

0806

US 4822718 A 19890418 US 1986-825855

1986

0204

US 4876165 A 19891024 US 1987-2107

1987

0112

JP 62264051 A2 19871117 JP 1987-21945

1987

0203

JP 08003058 B4 19960117  
AT 98789 E 19940115 AT 1987-301002

1987

0204

WO 8805180 A1 19880714 WO 1988-US42

1988

0112

W: JP, KR  
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE  
EP 298116 A1 19890111 EP 1988-901669

1988

0112

EP 298116 B1 19970827

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE  
AT 157465 E 19970915 AT 1988-901669

1988

0112

JP 06313968 A2 19941108 JP 1993-196996

1993

0714

PRIORITY APPLN. INFO.:

US 1986-825855 A

1986

0204

US 1987-2107

1987

0112

US 1982-431798

1982

0930

JP 1993-196996 A3

1983

0929

US 1984-638258 A2

1984

0806

EP 1987-301002 A

1987

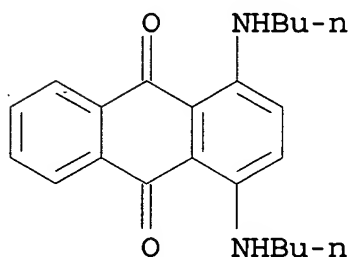
0204

AB The title coating which **absorbs light** from 200 to 1000 nm is comprised of **light-absorbing** dyes and a polymer binder which forms a tightly adhering, thin, smooth and uniform coating in a solvent system. The binder is preferably a polyimide resin or a polyamic acid precursor of a polyimide resin. The **light-absorbing** coating is formed on a photoresist for fabrication of integrated circuits to act as a true surface for autofocus of the camera used to expose the photoresist or used where a light-impermeable, high-contrast or black coating is needed, such as, in liquid crystal displays, light-emitting diodes, photodiodes, solid-state lasers, and patterning apertures on light-wave modulators. Thus, a polyamic acid (a polyimide precursor, obtained by reacting oxydianiline with pyromellitic dianhydride), N-methylpyrrolidone, cyclohexanone, Solvent Blue 44, Solvent Blue 45, Solvent Red 92, and curcumin were mixed and coated on a light-emitting diode to give a black background contrast coating which **absorbed light** between 200-750 nm.

IT 17354-14-2, Solvent Blue 35  
(**light-absorbing** coatings containing polyimide and dyes and, for **optical** instruments)

RN 17354-14-2 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis(butylamino)- (9CI) (CA INDEX NAME)



IC ICM G03F007-00  
ICS C09D005-32; C09D003-49; G02B005-22; G02F001-13; G03F001-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 73, 76

ST **light absorbing** coating photoresist  
photolithog; liq crystal display dye coating; diode light emitting dye coating

IT Polyamic acids  
Polyimides, uses and miscellaneous

(**light-absorbing** coatings containing dyes and, for optical instruments)

IT Optical imaging **devices**  
(**light-absorbing** coatings containing polyimide and dyes for)

IT Optical materials  
(**light-absorbing**, containing polyimide and dyes)

IT Optical imaging **devices**  
(electro-, liquid-crystal, **light-absorbing** coatings containing polyimide and dyes for)

IT Lithography  
(photo-, **light-absorbing** coatings containing polyimide and dyes for use in)

IT Resists  
(photo-, **light-absorbing** coatings containing polyimide and dyes for, as true surfaces for autofocus of camera for exposure).

IT Lasers  
(solid-state, **light-absorbing** coatings containing polyimide and dyes for)

IT 89-32-7D, reaction products with oxydianiline 101-80-4D,  
reaction products with pyromellitic dianhydride 9003-39-8,  
Poly(vinyl pyrrolidone)  
(**light-absorbing** coatings containing dyes and, for optical instruments)

IT 82-38-2 458-37-7, Curcumin **17354-14-2**, Solvent Blue 35  
37229-23-5 61725-69-7 61725-76-6 61901-93-7 114680-60-3  
(**light-absorbing** coatings containing polyimide and dyes and, for **optical** instruments)

L34 ANSWER 27 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:169170 HCAPLUS

DOCUMENT NUMBER: 108:169170

TITLE: Anthraquinone dyes for optical **recording** materials

INVENTOR(S): Schwander, Hansrudolf

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

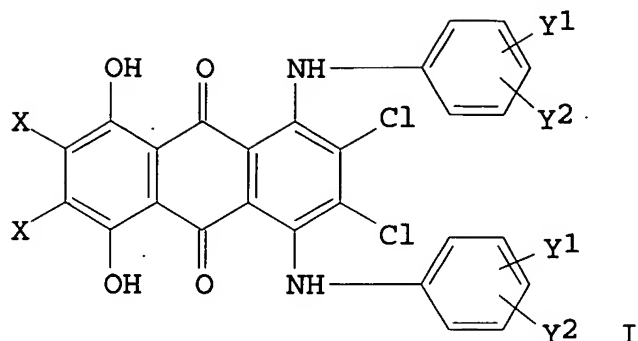
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

----- ----- DE 3724836	A1	19880211	DE 1987-3724836	
1987				
0727				
CH 670912	A	19890714	CH 1986-3064	
1986				
0730				
GB 2193723	A1	19880217	GB 1987-17515	
1987				
0723				
GB 2193723	B2	19900704		
FR 2602365	A1	19880205	FR 1987-10694	
1987				
0728				
JP 63039390	A2	19880219	JP 1987-189039	
1987				
0730				
PRIORITY APPLN. INFO.:			CH 1986-3064	A
1986				
0730				
OTHER SOURCE(S):	MARPAT 108:169170			
GI				



AB Anthraquinone dyes I (X = H, halogen; Y1, Y2 = nonionic substituent), useful for laser-readable and -printable **recording** materials, are prepared. These optical **recording** materials contain a carrier, a **light-absorbing** layer containing  $\geq 1$  I compound, and an optional light-reflecting layer. Thus, 1,2,3,4-tetrachloroquinizarin was condensed with p-toluidine, forming I (X = Y2 = H, Y1 = 4-Me),

1.0

g of which was mixed with 1.0 g cellulose nitrate, 120 g cyclohexanone added, the mixture filtered, and the solution centrifuged

at 2000 rpm. A glass plate which contained a 50-nm-thick Al layer

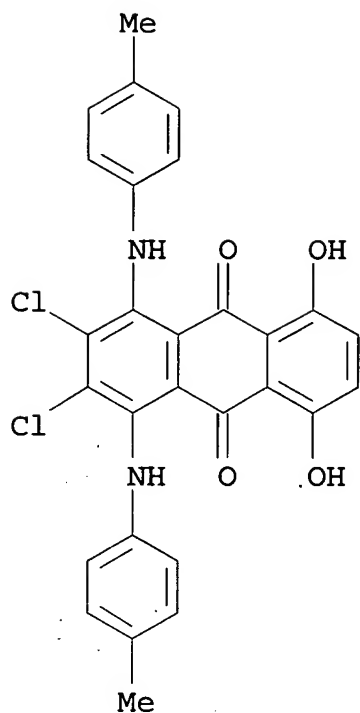
was coated with the solution forming  $\approx 160$ -nm-thick **light-absorbing** layer. The above material was exposed with a focused beam, pulsed He-Ne laser ( $\lambda = 633$  nm). This exposed material, when read with a He-Ne laser, improves the signal, which had a high signal/noise ratio.

IT 113943-18-3P 113943-19-4P

(manufacture of, as dye for **optical recording** materials)

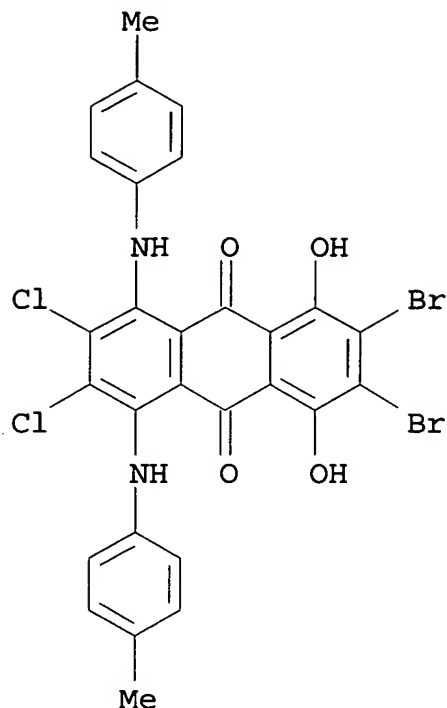
RN 113943-18-3 HCAPLUS

CN 9,10-Anthracenedione, 2,3-dichloro-5,8-dihydroxy-1,4-bis[(4-methylphenyl)amino] - (9CI) (CA INDEX NAME)



RN 113943-19-4 HCAPLUS

CN 9,10-Anthracenedione, 2,3-dibromo-6,7-dichloro-1,4-dihydroxy-5,8-bis[(4-methylphenyl)amino]- (9CI) (CA INDEX NAME)



- IC ICM C09B001-514  
ICS G11B007-24; C09B005-32
- CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 74
- ST optical **recording** material quinone dye; laser readable  
optical **recording** material; tetrachloroquinizarin  
toluidine condensation anthraquinone dye
- IT Polycarbonates, uses and miscellaneous  
Polysulfonamides  
(binder, for optical **recording** material **light**  
-**absorbing** layers containing anthraquinone dyes)
- IT Dyes, anthraquinone  
(manufacture of, for optical **recording** materials)
- IT **Recording** materials  
(optical, anthraquinone dyes for, manufacture of)
- IT **Recording**  
(optical, laser, anthraquinone dyes for, manufacture of)
- IT 9003-20-7, Polyvinylacetate 9003-39-8 9003-53-6, Polystyrene  
9004-36-8 9004-70-0, Cellulose nitrate  
(binder, for optical **recording** material **light**  
-**absorbing** layers containing anthraquinone dyes)
- IT 113943-18-3P 113943-19-4P

(manufacture of, as dye for **optical recording** materials)

IT 7440-16-6, Rhodium, uses and miscellaneous  
 (optical **recording** materials containing, in light reflecting layer)

IT 7429-90-5, uses and miscellaneous 7439-92-1, uses and miscellaneous  
 7440-31-5, Tin, uses and miscellaneous  
 7440-50-8, uses and miscellaneous 7440-57-5, Gold, uses and miscellaneous  
 7440-69-9, Bismuth, uses and miscellaneous  
 (optical **recording** materials containing, in light-reflecting layer)

L34 ANSWER 28 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:506411 HCAPLUS

DOCUMENT NUMBER: 107:106411

TITLE: Optical **recording** materials

INVENTOR(S): Tomita, Yoshinori; Eguchi, Takeshi; Kawada, Haruki; Nakagiri, Takashi; Nishimura, Yukio; Saito, Kenji

PATENT ASSIGNEE(S): Canon K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE ----- -----	----	-----	-----
JP 61180238	A2	19860812	JP 1985-19884

1985

0206

PRIORITY APPLN. INFO.:

JP 1985-19884

1985

0206

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT

\*

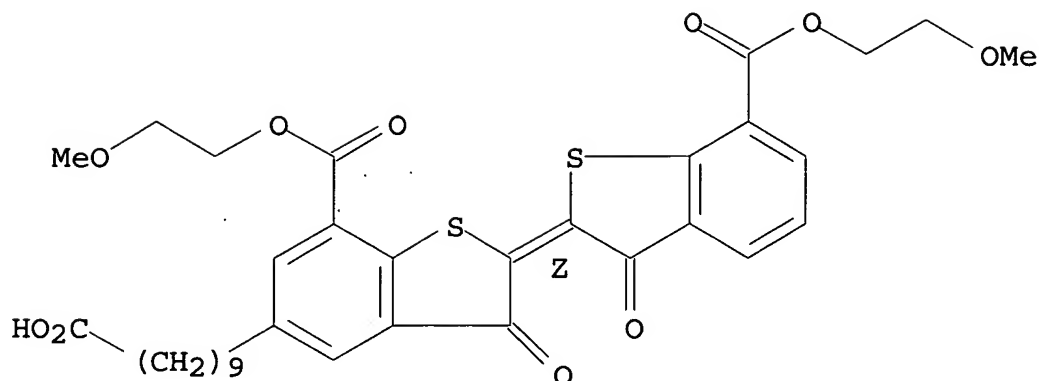
AB The title materials contain a **light-reflecting** or **light-absorbing** layer, a liquid layer, and a monolayer or multilayer of a clathrate compound that desorbs metal ions or atoms by photoisomerization. The materials have high resolution, contrast, and sensitivity. The materials are also erasable and adaptable for large scale manufacture. Some 0.3 mL of a solution of 1 mmol I in 300 mL CHCl<sub>3</sub> was spread on the surface of H<sub>2</sub>O surrounded by a movable 20 + 50 cm frame. After the CHCl<sub>3</sub> was evaporated, the layer of I was compressed to a 20 + 5 cm size, and an 1 + 3 cm<sup>2</sup> of the resultant monomol. layer was transferred to an Al-deposited glass plate. The area occupied by a single mol. was 10 Å<sup>2</sup>. The layer on the plate was immersed in aqueous 1 mM CuCl<sub>2</sub>. The reflectance of the material to a 780 nm laser reading beam was >66%. Irradiation of the material produced isomerization of I to II, which absorbed 1 Cu(II) ion/mol., to obtain an optical information **recording** material. The material was immersed in pure H<sub>2</sub>O and irradiated with a 400 nm light beam to produce isomerization of II back to I with liberation of Cu(II) into H<sub>2</sub>O. The **recorded** material was dried in vacuum and the **recorded** information was readable using a photosensor.

IT 106534-22-9  
(**optical recording** material from metal ion-containing mono- or multilayer of)

RN 106534-22-9 HCAPLUS

CN Benzo[b]thiophene-5-decanoic acid, 2,3-dihydro-7-[(2-methoxyethoxy)carbonyl]-2-[7-[(2-methoxyethoxy)carbonyl]-3-oxobenzo[b]thien-2(3H)-ylidene]-3-oxo-, (Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



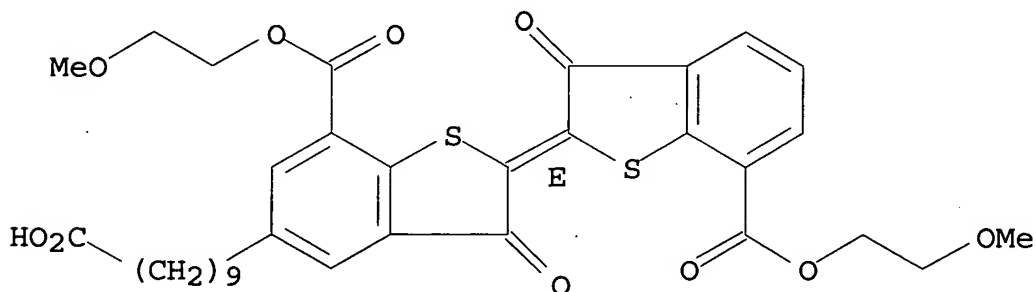
IT 106534-21-8

(photoisomerization of, **optical recording**  
in relation to)

RN 106534-21-8 HCAPLUS

CN Benzo[b]thiophene-5-decanoic acid, 2,3-dihydro-7-[(2-methoxyethoxy) carbonyl]-2-[7-[(2-methoxyethoxy) carbonyl]-3-oxobenzo[b]thien-2(3H)-ylidene]-3-oxo-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IC ICM G03C001-72

ICS B41M005-26; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **optical recording** photoisomerizable clathrate monolayer;  
multilayer photoisomerizable clathrate information  
**recording**; optical information **recording**  
clathrate photoisomerization; metal clathrate photoisomerization  
**optical recording**

IT Inclusion compounds

(clathrates, photoisomerizable, **optical recording**)

materials from mono- or multilayers of)

IT **Recording materials**  
(optical, from metal-containing mono- or multilayers of photoisomerizable crown ethers)

IT Isomerization  
(photochem., of crown ethers in preparation of optical **recording materials**)

IT 106534-15-0 106534-17-2 **106534-22-9** 106566-61-4  
107602-94-8  
(**optical recording** material from metal ion-containing mono- or multilayer of)

IT 7439-97-6, uses and miscellaneous 7439-98-7, uses and miscellaneous 7440-09-7, uses and miscellaneous 7440-23-5, uses and miscellaneous 7440-50-8, uses and miscellaneous  
(**optical recording materials** from mono- or multilayers of crown ethers and)

IT 106512-78-1 106534-14-9 106534-16-1 106534-18-3  
**106534-21-8**  
(photoisomerization of, **optical recording** in relation to)

L34 ANSWER 29 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:487296 HCAPLUS

DOCUMENT NUMBER: 107:87296

TITLE: Optical **recording** material

INVENTOR(S): Ozawa, Tetsuo; Maeda, Shuichi; Kurose, Yutaka

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 62018290	A2	19870127	JP 1985-156596

1985

0716

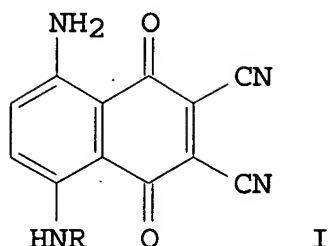
PRIORITY APPLN. INFO.:

JP 1985-156596

1985

0716

GI



AB The title material is composed of a support bearing a **recording** layer containing a **light-absorbing** compound I [R = Ph or naphthalene ring substituted by 1 or 2 groups

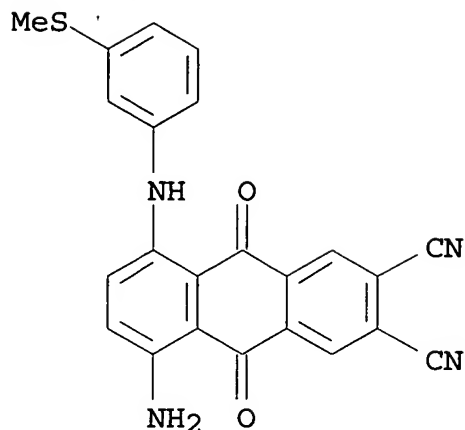
selected from halo, alkylthio, hydroxylalkyl, aralkyloxy]. The material has high sensitivity for laser beam **recording** and high storage stability. Thus, 5-amino-2,3-dicyano-1,4-naphthoquinone was reacted with p-hydroxyethylaniline in EtOH and recrystd. to yield I (R = P-C<sub>6</sub>H<sub>4</sub>C<sub>2</sub>H<sub>4</sub>OH) (II). II was vacuum-sublimated on a methacrylate resin support to form a **recording** dye layer with a thickness of 2010 Å and a broad absorption peaked at 790 nm. The dye layer was exposed to

a semiconductor laser beam (power 4 m W; diameter 1 μm) operated at 830 nm to give a recoded pit (1 + 2 μm in size) with a clear outline and a high carrier-to-noise (C/N) ratio of 52 dB.

IT 109825-44-7 (optical recording layer from)

RN 109825-44-7 HCAPLUS

CN 2,3-Anthracenedicarbonitrile, 5-amino-9,10-dihydro-8-[[3-(methylthio)phenyl]amino]-9,10-dioxo- (9CI) (CA INDEX NAME)



IC ICM B41M005-26  
ICS G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 41

ST semiconductor laser optical **recording disk**;  
naphthoquinone amino cyano optical **recording layer**

IT **Recording materials**  
(optical, aminocicyanonaphthoquinone dyes for)

IT 80830-01-9 101816-58-4 101816-59-5 107717-15-7  
109793-09-1  
109793-10-4 109793-11-5 109793-12-6 109793-13-7  
109793-14-8 109793-15-9 109793-16-0 109793-17-1  
109793-18-2 109793-19-3 109793-20-6 109793-21-7  
109793-22-8 109793-23-9 109793-24-0 109793-25-1  
**109825-44-7**  
(optical **recording layer** from)

IT 2987-53-3  
(reaction of, with aminodicyanonaphthoquinone, in preparation of dye  
for optical **recording material**)

IT 104-10-9  
(reaction of, with aminodicyanonaphthoquinone, in preparation of  
dyes for optical **recording material**)

IT 68217-29-8  
(reaction of, with methylethylaniline, in preparation of dye  
for  
optical **recording material**)

L34 ANSWER 30 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:129418 HCAPLUS  
 DOCUMENT NUMBER: 106:129418  
 TITLE: Laser-sensitive optical **recording**  
 medium  
 INVENTOR(S): Ozawa, Hiroshi; Nishizawa, Isao; Hirose,  
 Sumio; Abe, Kenji; Hosono, Yoichi; Nakatsuka,  
 Masakatsu  
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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JP 61171388	A2	19860802	JP 1985-10774

1985

0125

PRIORITY APPLN. INFO.:

JP 1985-10774

1985

0125

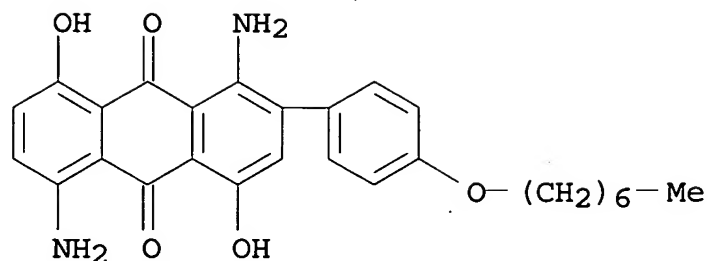
AB The **recording** medium has a **recording** layer  
 composed of a dichromatic dye having a **light**  
**absorption** maximum at 550-900 nm and a polymer that has an  
 anisotropic mol. assembling state at <50° and a partial  
 anisotropic or completely isotropic state at 80-350°. The  
 polymer may be prepared by heating a composition containing  
 polyhexamethylene  
 terephthalate having OH groups at the ends and a polyethylene  
 glycol-diphenylmethane diisocyanate oligomer having isocyanate  
 groups at the ends.

IT 78536-02-4

(dichromatic dye, erasable laser-sensitive **optical**  
**recording** medium with **recording** layer containing)

RN 78536-02-4 HCAPLUS

CN 9,10-Anthracenedione, 1,5-diamino-2-[4-(heptyloxy)phenyl]-4,8-  
 dihydroxy- (9CI) (CA INDEX NAME)



- IC ICM B41M005-26  
ICS G11B007-24
- CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST laser optical **recording** medium erasable; dichromatic dye polymer laser **recording**
- IT Polyamides, uses and miscellaneous  
Urethane polymers, uses and miscellaneous  
(aromatic, cholesteric-nematic liquid crystal, erasable laser-sensitive optical **recording** medium with **recording** layer containing)
- IT **Recording** materials  
(optical, laser-sensitive, erasable, with **recording** layer containing dichromatic dye and anisotropic polymer)
- IT 107185-51-3  
(cholesteric-nematic liquid crystal, erasable laser-sensitive optical **recording** medium with **recording** layer containing)
- IT 4197-25-5 28782-33-4 **78536-02-4**  
(dichromatic dye, erasable laser-sensitive **optical recording** medium with **recording** layer containing)
- IT 111-20-6D, polymers with diphenylmethane diisocyanate  
25322-68-3D, Polyethylene glycol, oligomers with diphenylmethane diisocyanate, polymers with polyhexamethylene terephthalate  
26618-59-7D, Polyhexamethylene terephthalate, polymer with polyethylene glycol-diphenylmethane diisocyanate oligomer  
26637-42-3D, Polyhexamethylene terephthalate, polymer with polyethylene glycol-diphenylmethane diisocyanate oligomer  
(erasable laser-sensitive optical **recording** medium with **recording** layer containing)

L34 ANSWER 31 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1986:505851 HCAPLUS  
DOCUMENT NUMBER: 105:105851  
TITLE: Optical **recording** material  
INVENTOR(S): Simmons, Howard Ensign, III

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA  
SOURCE: Braz. Pedido PI, 20 pp.  
CODEN: BPXXDX  
DOCUMENT TYPE: Patent  
LANGUAGE: Portuguese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
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BR 8500852	A	19851015	BR 1985-852
1985			
0226			
PRIORITY APPLN. INFO.:		US 1984-586106	A
1984			
0301			

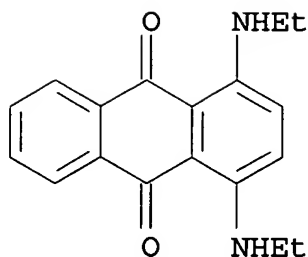
AB The title material has a **light-absorbing** layer placed on a dimensionally stable substrate. The layer is made of a polymeric dye with absorptivity of .apprx.0.046 in the visible and IR regions for 1  $\mu$ m thickness. The dye is obtained by condensing-malonaldehyde (or adipic or sebacic chloride) with chromophoric aromatic polyamines (thionine, violet cresyl acetate, Blue 59 Solvent). The material obtained has high reflectivity, short image reproduction time, low thermal-diffusion coefficient, good image contrast, and long-term stability and is economic to manufacture

IT 6994-46-3

(condensation reaction of, with malonaldehyde or adipic chloride in preparation of polymeric dye for **optical recording** materials)

RN 6994-46-3 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis(ethylamino)- (9CI) (CA INDEX NAME)



IC ICM G03G005-07  
ICS G01D015-14

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST optical **recording** material polymeric dye

IT Dyes  
(polymeric, prepared by condensing malonaldehyde or adipic chloride with chromophoric aromatic polyamines, for optical **recording** materials)

IT **Recording** materials  
(optical, polymeric dyes prepared by condensing malonaldehyde or  
or  
adipic chloride with chromophoric aromatic polyamines)

IT Amines, reactions  
(poly-, aromatic, chromophoric, condensation reaction of, with  
malonaldehyde or adipic chloride in preparation of polymeric  
dyes  
for optical **recording** materials)

IT 111-19-3 111-50-2 542-78-9  
(condensation reaction of, with chromophoric aromatic  
polyamines  
in preparation of polymeric dyes for optical **recording**  
materials)

IT 581-64-6 **6994-46-3** 10510-54-0  
(condensation reaction of, with malonaldehyde or adipic  
chloride in preparation of polymeric dye for **optical**  
**recording** materials)

L34 ANSWER 32 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:433038 HCAPLUS

DOCUMENT NUMBER: 105:33038

TITLE: Optical **recording** material  
containing aminoanthraquinone derivative

INVENTOR(S): Neumann, Peter; Albert, Bernhard; Etzbach,  
Karl Heinz; Schomann, Klaus Dieter

PATENT ASSIGNEE(S): BASF A.-G. , Fed. Rep. Ger.

SOURCE: Ger. Offen., 15 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DE 3426093	A1	19860123	DE 1984-3426093

1984

0714

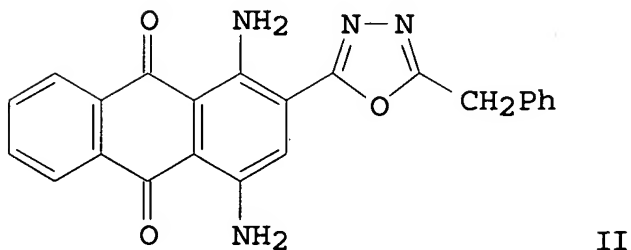
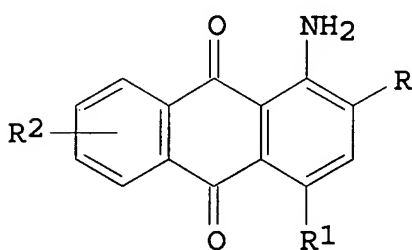
PRIORITY APPLN. INFO.:

DE 1984-3426093

1984

0714

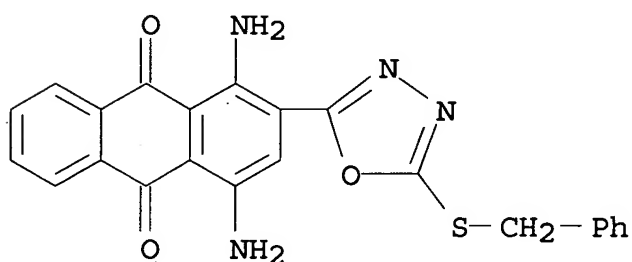
GI



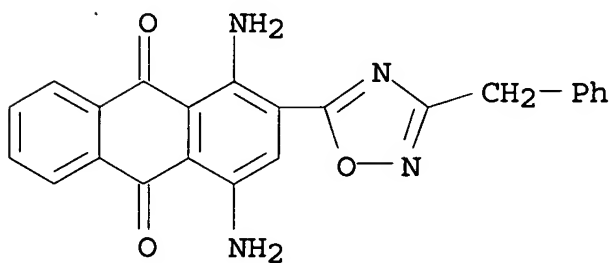
AB Optical **recording** materials, having a smooth **light-absorbing** layer with a high optical quality, so that the **recorded** information shows a high signal-to-noise ratio, are composed of a support with a **light-absorbing** layer containing an aminoanthraquinone derivative (I; R = heterocyclyl; R1 = NH2, arylamino, aralkylamino, or alkylamino; and R2 = H, alkyl, aryl, aralkyl, OH, alkoxy, aralkoxy, aryloxy, NO2, NH2, alkylamino, arylamino, alkylthio, or arylthio). Thus, a glass support having a 50 nm thick Au reflector layer was coated with a 20 nm thick II layer by vapor deposition. **Recording** on the layer was

accomplished by using a He-Ne laser.

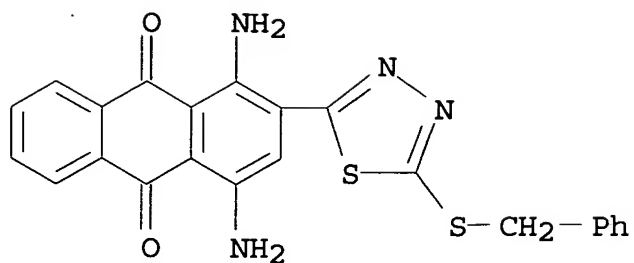
IT 7053-16-9 30065-52-2 83567-53-7  
 95222-72-3 102864-65-3 103013-42-9  
 103013-43-0 103013-44-1 103013-45-2  
 (laser optical recording materials containing,  
 with high signal-to-noise ratio)  
 RN 7053-16-9 HCAPLUS  
 CN 9,10-Anthracenedione,  
 1,4-diamino-2-[5-[(phenylmethyl)thio]-1,3,4-  
 oxadiazol-2-yl]- (9CI) (CA INDEX NAME)



RN 30065-52-2 HCAPLUS  
 CN 9,10-Anthracenedione, 1,4-diamino-2-[3-(phenylmethyl)-1,2,4-  
 oxadiazol-5-yl]- (9CI) (CA INDEX NAME)

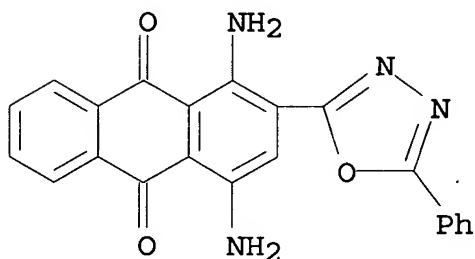


RN 83567-53-7 HCAPLUS  
 CN 9,10-Anthracenedione,  
 1,4-diamino-2-[5-[(phenylmethyl)thio]-1,3,4-  
 thiadiazol-2-yl]- (9CI) (CA INDEX NAME)



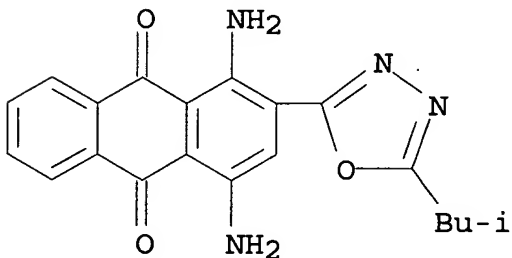
RN 95222-72-3 HCAPLUS

CN 9,10-Anthracedione, 1,4-diamino-2-(5-phenyl-1,3,4-oxadiazol-2-yl)- (9CI) (CA INDEX NAME)



RN 102864-65-3 HCAPLUS

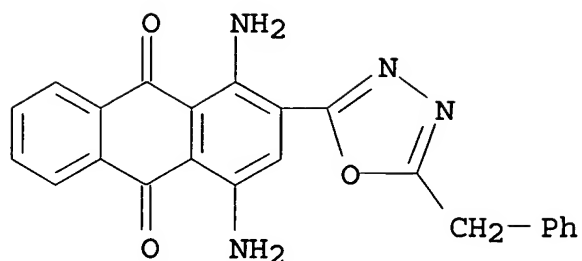
CN 9,10-Anthracedione, 1,4-diaminomethyl-2-[5-(2-methylpropyl)-1,3,4-oxadiazol-2-yl]- (9CI) (CA INDEX NAME)



D1-Me

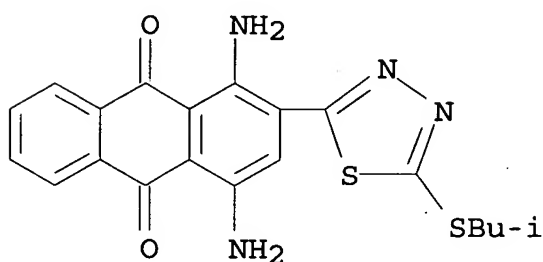
RN 103013-42-9 HCAPLUS

CN 9,10-Anthracedione, 1,4-diamino-2-[5-(phenylmethyl)-1,3,4-oxadiazol-2-yl]- (9CI) (CA INDEX NAME)



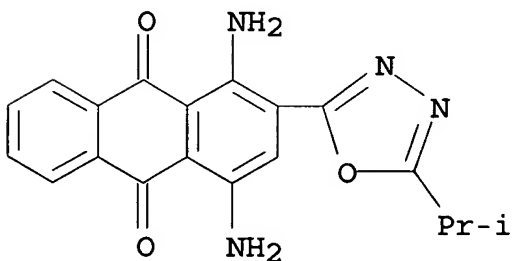
RN 103013-43-0 HCAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-2-[5-[(2-methylpropyl)thio]-1,3,4-thiadiazol-2-yl]- (9CI) (CA INDEX NAME)



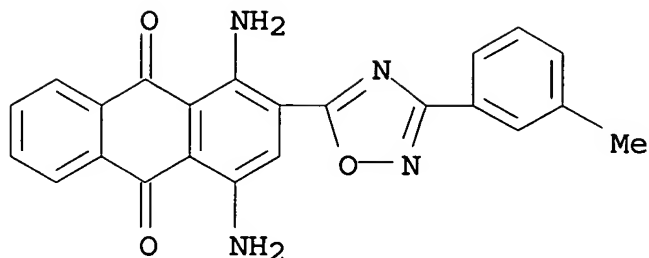
RN 103013-44-1 HCAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-2-[5-(1-methylethyl)-1,3,4-oxadiazol-2-yl]- (9CI) (CA INDEX NAME)



RN 103013-45-2 HCAPLUS

CN 9,10-Anthracenedione, 1,4-diamino-2-[3-(3-methylphenyl)-1,2,4-oxadiazol-5-yl]- (9CI) (CA INDEX NAME)



IC ICM G11B007-24  
ICS C09B001-16; C09B001-50  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 41  
ST aminoanthraquinone deriv laser **recording** material; oxadiazolyldiaminoanthraquinone deriv laser **recording** material; thiadiazolyldiaminoanthraquinone deriv laser **recording** material; anthraquinone deriv laser **recording** material  
IT Dyes, anthraquinone  
(laser optical **recording** materials containing, with high signal-to-noise ratio)  
IT **Recording** materials  
(optical, containing aminoanthraquinone derivs. for high signal-to-noise ratio)  
IT 7053-16-9 30065-52-2 83567-53-7  
95222-72-3 102864-65-3 103013-42-9  
103013-43-0 103013-44-1 103013-45-2  
(laser optical **recording** materials containing, with high signal-to-noise ratio)  
IT 7429-90-5, uses and miscellaneous 7440-57-5, uses and miscellaneous  
(laser optical **recording** materials with aminoanthraquinone derivative-**recording** layer and reflecting layer of, with high signal-to-noise ratio)

L34 ANSWER 33 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1985:141001 HCAPLUS  
DOCUMENT NUMBER: 102:141001  
TITLE: Laser multilayer **recording** materials  
PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Public Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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JP 59210543	A2	19841129	JP 1983-84249

1983

0516

PRIORITY APPLN. INFO.: JP 1983-84249

1983

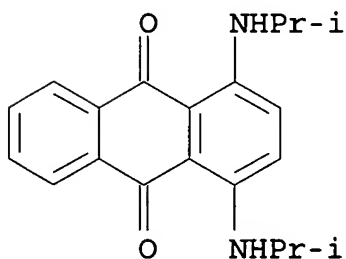
0516

AB A multilayer laser **recording** material with improved sensitivity and stability is obtained by forming on a substrate a multiset laminate wherein each set is a sandwiched structure comprised of a light absorbing middle layer which is the same for all sets and 2 transparent outer layers. The above sandwiched multiset laminate may contain >2 different light absorbing middle layers.

IT 14233-37-5  
(laser multiset sandwiched laminated **recording** materials with **light-absorbing** layer of)

RN 14233-37-5 HCAPLUS

CN 9,10-Anthracenedione, 1,4-bis[(1-methylethyl)amino] - (9CI) (CA INDEX NAME)



IC G11B007-24; B41M005-26; G11C013-04

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST laser multilayer **recording** sandwich structure;

**recording** laser absorption transparent multilayer  
 IT Glass, nonoxide  
     (chalcogenide, laser multiset sandwiched laminated **recording** materials with light-absorbing layer of)  
 IT Amides, uses and miscellaneous  
     (aliphatic, laser multiset sandwiched laminated **recording** materials with transparent layer of)  
 IT **Recording** materials  
     (optical, multiset sandwiched laminate for, containing light-absorbing middle layer)  
 IT 7440-21-3, uses and miscellaneous  
     (amorphous hydrogenated, laser multiset sandwiched laminated **recording** materials with light-absorbing layer of)  
 IT 2321-07-5  
     (laser multiset sandwiched laminated **recording** materials containing)  
 IT 81-88-9 989-38-8 1562-85-2 **14233-37-5** 15730-54-8  
     72079-62-0 95665-09-1  
     (laser multiset sandwiched laminated **recording** materials with **light-absorbing** layer of)  
 IT 7440-22-4, uses and miscellaneous 7440-57-5, uses and miscellaneous 7440-69-9, uses and miscellaneous 13494-80-9, uses and miscellaneous 13930-88-6 53199-37-4 89962-82-3. 95570-07-3  
     (laser multiset sandwiched laminated **recording** materials with light-adsorbing layer of)  
 IT 77-09-8 80-05-7, uses and miscellaneous 124-26-5 125-20-2  
     1314-35-8, uses and miscellaneous 1552-42-7 5339-80-0  
     7446-07-3 7631-86-9, uses and miscellaneous 26628-47-7  
     87715-08-0  
     (laser multiset sandwiched laminated **recording** materials with transparent layer of)

L34 ANSWER 34 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1985:123172 HCAPLUS  
 DOCUMENT NUMBER: 102:123172  
 TITLE: Optical **recording** materials  
 PATENT ASSIGNEE(S): TDK Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
     CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			

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JP 59045195

A2

19840313

JP 1982-156126

1982

0908

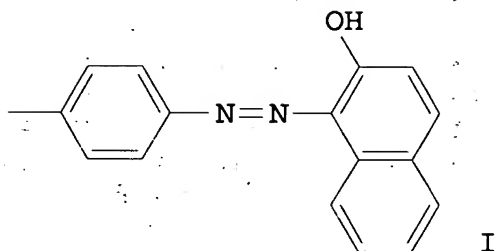
PRIORITY APPLN. INFO.:

JP 1982-156126

1982

0908

GI



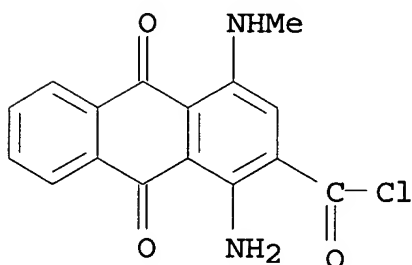
AB Optical **recording** materials have a **recording** layer containing a thermoplastic vinyl polymer having dye residues.

Preferably, the dye residues are on the polymer side chains, and the number of repeating units  $\leq 1000$ . The materials are free from phase separation and dye migration because the **recording** layer consists of a **light-absorbing** polymer, and high dye concentration may be employed in order to increase the

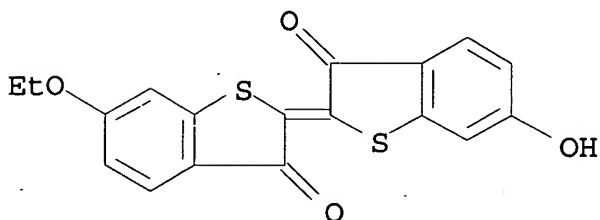
sensitivity and rate of **recording**. It also provides high signal-to-noise ratio on reading and high storage stability. Thus, polystyrene having 40 monomer units was nitrated using  $\text{HNO}_3$  and  $\text{H}_2\text{SO}_4$ , reduced with  $\text{SnCl}_2$  in  $\text{HCl}$ , diazotized, and coupled with

$\beta$ -naphthol to obtain deep red polymer having 20 mol% of the dye unit I with 50% yield. The polymer was coated on an acrylic polymer plate. Bit **recording** and reading using a He-Cd laser showed improved sensitivity, stability in repeated reading, and storage stability, against parallel run using a dye-containing

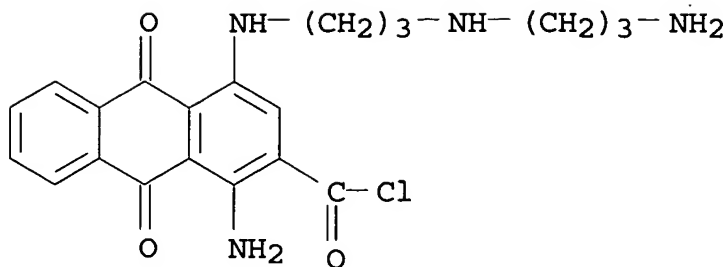
polyethylene resin.  
 IT 95235-76-0D, reaction products with aminated vinyl  
 polymers 95255-36-0D, reaction products with vinyl  
 polymers  
 (for **optical recording** materials)  
 RN 95235-76-0 HCAPLUS  
 CN 2-Anthracenecarbonyl chloride, 1-amino-9,10-dihydro-4-  
 (methylamino)-9,10-dioxo- (9CI) (CA INDEX NAME)



RN 95255-36-0 HCAPLUS  
 CN Benzo[b]thiophen-3(2H)-one, 6-ethoxy-2-(6-hydroxy-3-oxobenzo[b]thien-2(3H)-ylidene)- (9CI) (CA INDEX NAME)



IT 95235-78-2D, reaction products with aminated  
 poly(α-methylstyrene)  
 (optical recording materials from)  
 RN 95235-78-2 HCAPLUS  
 CN 2-Anthracenecarbonyl chloride, 1-amino-4-[[3-[(3-aminopropyl)amino]propyl]amino]-9,10-dihydro-9,10-dioxo- (9CI)  
 (CA INDEX NAME)



- IC B41M005-26; G03C001-72; G11B007-24; G11C013-04  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST optical **recording** colored vinyl polymer  
 IT **Recording** materials  
     (optical, containing thermoplastic vinyl polymer having dye residues on side chains for increased sensitivity and **recording** speed)  
 IT 60-09-3D, reaction products with vinyl polymers 116-85-8D, reaction products with vinyl polymers 23222-15-3D, reaction products with aminated vinyl polymers 95235-75-9D, reaction products with aminated vinyl polymers **95235-76-0D**, reaction products with aminated vinyl polymers 95235-77-1D, reaction products with vinyl polymers **95255-36-0D**, reaction products with vinyl polymers 95255-37-1D, reaction products with aminated vinyl polymers 95392-42-0D, reaction products with vinyl polymers  
     (for **optical recording** materials)  
 IT 135-19-3D, reaction products with diazotized polystyrene 9003-53-6D, diazotized, reaction product with  $\beta$ -naphthol (optical **recording** material from)  
 IT 101-56-4D, reaction products with hydroxyphenylmethacrylamide 31259-10-6D, reaction products with phenylaminobenzenediazonium chloride **95235-78-2D**, reaction products with aminated poly( $\alpha$ -methylstyrene)  
     (optical **recording** materials from)  
 IT 25014-31-7D, aminated  
     (reaction of, in preparation of blue-colored polymeric product for  
     optical **recording** materials)

L34 ANSWER 35 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1984:638258 HCAPLUS  
 DOCUMENT NUMBER: 101:238258  
 TITLE: Laser **recording** material  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

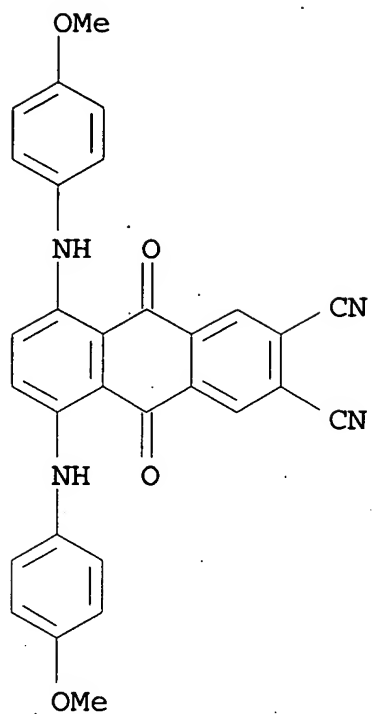
PATENT NO.	KIND	DATE	APPLICATION NO.
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JP 58224448	A2	19831226	JP 1982-107543
1982			
0624			
JP 04024771	B4	19920428	
PRIORITY APPLN. INFO.:			JP 1982-107543
1982			
0624			

AB A laser **recording** material with improved **recording** sensitivity to a semiconductor laser beam is obtained by laminating on a substrate in any order a light reflecting layer comprised of a low melting metal (e.g., Te) or a dye having a bronze luster and a light absorbing layer comprised of a compound having the anthraquinone or indanthrene structure or a composition containing the above compound and other components.

IT 93376-80-8 93376-84-2  
(laser **recording** materials with **light-absorbing** layer of)

RN 93376-80-8 HCAPLUS

CN 2,3-Anthracenedicarbonitrile, 9,10-dihydro-5,8-bis[(4-methoxyphenyl)amino]-9,10-dioxo- (9CI) (CA INDEX NAME)



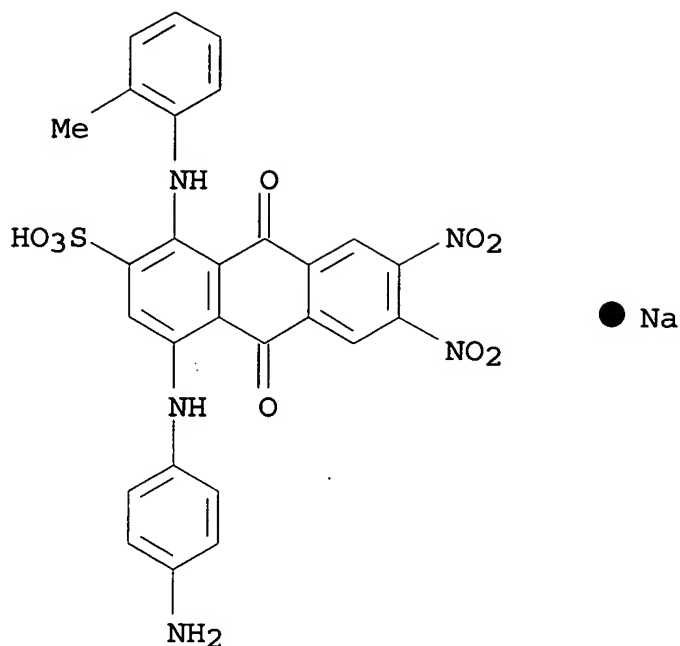
RN 93376-84-2 HCAPLUS

CN 2-Anthracenesulfonic acid,

4-[(4-aminophenyl)amino]-9,10-dihydro-1-

[(2-methylphenyl)amino]-6,7-dinitro-9,10-dioxo-, monosodium salt

(9CI) (CA INDEX NAME)



IC G11B007-24

ICA B41M005-00; G11C013-04

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST laser **recording** reflecting absorbing layer

IT. Dyes

(indanthrene, laser **recording** materials containing)

IT Dyes, anthraquinone

(laser **recording** materials containing)

IT **Recording** materials

(optical, laser, with light effective layer and light adsorbing layer)

IT 61-73-4 482-89-3 1324-58-9 3248-93-9 7440-31-5, uses and miscellaneous 7440-38-2D, solid solns. with selenium and tellurium 7440-69-9, uses and miscellaneous 7782-49-2, uses and miscellaneous 7782-49-2D, solid solns. with arsenic and tellurium 13494-80-9, uses and miscellaneous 13494-80-9D, solid solns. with arsenic and selenium 15187-16-3 27906-68-9 55427-95-7 70066-45-4 93376-76-2 93376-77-3 (laser **recording** materials with light reflecting layer of)

IT 78679-96-6 93376-78-4 93376-79-5 **93376-80-8**

93376-81-9 93376-82-0 93376-83-1 **93376-84-2**

93376-85-3 93376-86-4 93376-87-5 93376-88-6 93395-45-0

(laser recording materials with light-  
absorbing layer of)

L34 ANSWER 36 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1983:513738 HCAPLUS  
 DOCUMENT NUMBER: 99:113738  
 TITLE: Optical **recording** medium  
 PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

DATE	PATENT NO.	KIND	DATE	APPLICATION NO.
1981	JP 58101093	A2	19830616	JP 1981-197708
1210	US 4465767	A	19840814	US 1982-424688
1982				
0927				
PRIORITY APPLN. INFO.:			JP 1981-189235	A
1981				
1127				
			JP 1981-189236	A
1981				
1127				
			JP 1981-197707	A
1981				
1210				

JP 1981-197708

A

1981

1210

AB An optical **recording** medium is claimed whose **recording** layer is composed of (1) a **light-absorbing** outer surface layer containing a dye, and (2) a metallic light-reflecting inner layer containing or not containing a dye.

This medium can be fabricated by coating and heating, and provides

a high sensitivity **recording** material not requiring a protecting layer, and can be manufactured by a continuous process.

Thus, a **recording** layer is formed on a glass plate by coating it with a mixture of AgNO<sub>3</sub>, aqueous NH<sub>3</sub>, glucose and Soluble Blue

OB (C.I.42780) (from Orient Chemical Ind.) and drying. Signals were

**recorded** by laser irradiation from the support side (7 nJ/pit) to yield pits of 1.1  $\mu$ m diameter. Similar **disk** without addition of the dye required 17.5 nJ/pit for formation of a pit of 1

$\mu$ m diameter

IT 1324-82-9 2580-78-1 4368-56-3

(optical laser **recording** material containing)

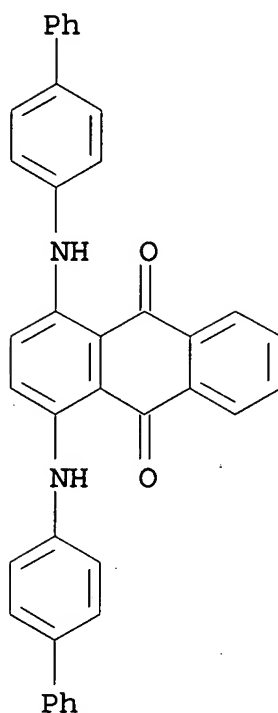
RN 1324-82-9 HCAPLUS

CN [1,1'-Biphenyl]sulfonic acid,

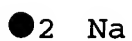
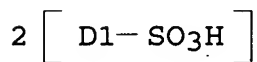
4,4''-[(9,10-dihydro-9,10-dioxo-1,4-

anthracenediyl)diimino]bis-, disodium salt (9CI) (CA INDEX NAME)

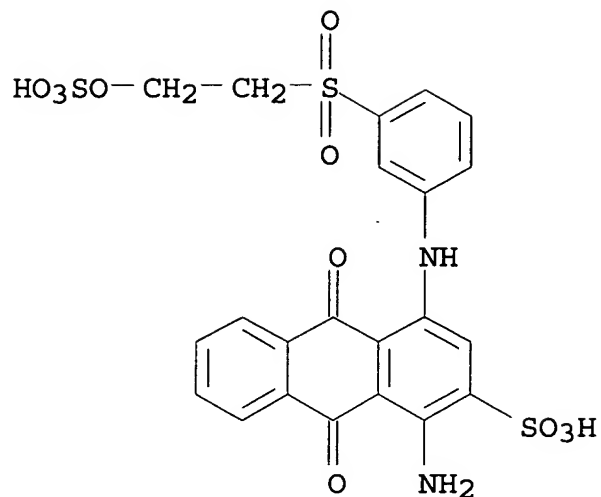
PAGE 1-A



PAGE 2-A

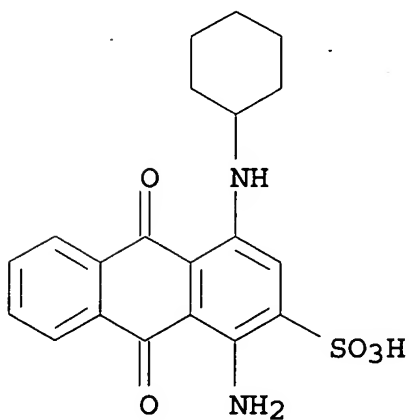


RN 2580-78-1 HCAPLUS  
CN 2-Anthracenesulfonic acid, 1-amino-9,10-dihydro-9,10-dioxo-4-[[3-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-, disodium salt (9CI)  
(CA INDEX NAME)



● 2 Na

RN 4368-56-3 HCAPLUS  
CN 2-Anthracenesulfonic acid, 1-amino-4-(cyclohexylamino)-9,10-dihydro-9,10-dioxo-, monosodium salt (9CI) (CA INDEX NAME)



● Na

IC B41M005-26; G11B007-24; G11C013-04

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST optical laser **recording** material  
 IT **Recording** materials  
     (laser, metallic light-reflecting layer and **light-absorbing** layer containing dye)  
 IT 61-73-4 **1324-82-9** 1937-37-7 **2580-78-1**  
     2602-46-2 2650-18-2 3520-42-1 3521-06-0 3875-70-5  
     **4368-56-3** 5489-77-0 6473-13-8 7761-88-8, uses and  
     miscellaneous 12219-19-1  
     (**optical** laser **recording** material containing)  
 IT 9002-86-2 9002-89-5 9003-39-8  
     (optical laser **recording** medium containing layer of)

L34 ANSWER 37 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:113325 HCAPLUS

DOCUMENT NUMBER: 96:113325

TITLE: Fluorescent composition having the ability to  
 change wavelengths of light, shaped article  
 of

this composition as a light wavelength  
 converting element, and **device** for  
 converting optical energy to electrical  
 energy

INVENTOR(S): using this element  
 Harada, Toshiaki; Hiramatsu, Toshiyuki;  
 Yamaji, Teizo

PATENT ASSIGNEE(S): Teijin Ltd. , Japan

SOURCE: Eur. Pat. Appl., 51 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.
EP 41274	A1	19811209	EP 1981-104273
1981			
0603			
EP 41274	B1	19840314	
R: DE, FR, GB			
JP 57000189	A2	19820105	JP 1980-74180

1980

0604

JP 62028817	B4	19870623	
JP 57021453	A2	19820204	JP 1980-95595

1980

0715

JP 57023653	A2	19820206	JP 1980-98633
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1980

0721

PRIORITY APPLN. INFO.:		JP 1980-74180	A
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1980

0604

		JP 1980-95595	A
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1980

0715

		JP 1980-98633	A
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1980

0721

AB A fluorescent composition which can **absorb light** over a broad wavelength region for release at a lower wavelength consists of a polymer with a relatively high mol. cohesive force and a relatively difficulty-soluble organic fluorescent substance. This composition has a high efficiency of light wavelength conversion and excellent light resistance. Thus, 103 parts of polyethylene terephthalate chips and 0.2 parts of C. I. Vat Blue 20 were dry-blended and melted at 300° to form a polymer. A 1-mm thick film obtained from this polymer had an absorption of 15.0% at 800 nm compared to 12.0% for a blank film. The film was colored blue and had red fluorescence. The fluorescence spectrum of this film showed that it **absorbed light** in

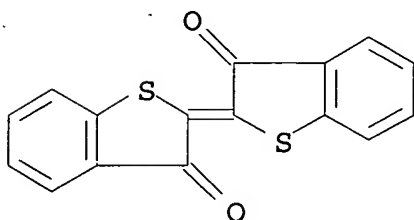
the vicinity of 600 nm and converted it to light in the vicinity of 640 nm. The radiation energy of the film for transmission of sunlight was measured. The film emitted greater energy than natural sunlight in the emission area and the efficiency of light conversion at one surface of this film was .apprx.12% in terms of an energy unit.

IT 522-75-8 2379-74-0

(phosphors from polymers and, for optical energy conversion)

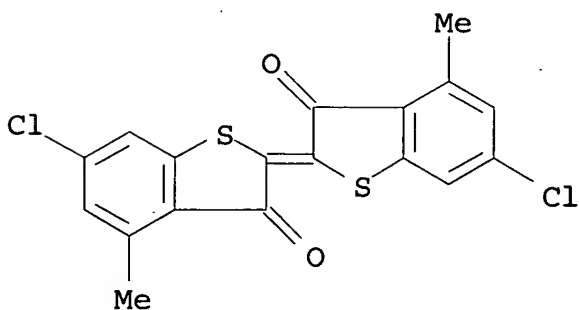
RN 522-75-8 HCAPLUS

CN Benzo[b]thiophen-3(2H)-one, 2-(3-oxobenzo[b]thien-2(3H)-ylidene)-(9CI) (CA INDEX NAME)



RN 2379-74-0 HCAPLUS

CN Benzo[b]thiophen-3(2H)-one, 6-chloro-2-(6-chloro-4-methyl-3-oxobenzo[b]thien-2(3H)-ylidene)-4-methyl- (9CI) (CA INDEX NAME)



IC C09K011-06; C09K011-02; C08K005-00; H01L031-04

CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 52

IT Photoelectric devices, solar  
(dye-polymer phosphors for)

IT 116-71-2 128-64-3 128-70-1 522-75-8  
2379-74-0 2379-77-3 4216-02-8 4424-06-0 4948-15-6

5521-31-3 6925-69-5 24108-89-2  
(phosphors from polymers and, for optical energy  
conversion)

L34 ANSWER 38 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1973:466857 HCAPLUS  
DOCUMENT NUMBER: 79:66857  
TITLE: Synthesis of high polymers with a light  
absorption band in the visible region by an  
interfacial polycondensation reaction  
AUTHOR(S): Shiba, Motoharu; Hiramatsu, Hidenori; Nakano,  
Hiroto; Kawano, Yasuaki; Shigeri, Yoshimichi;  
Kondo, Tamotsu  
CORPORATE SOURCE: Res. Lab., Chugai Pharm. Co., Ltd., Tokyo,  
Japan  
SOURCE: Polymer Journal (Tokyo, Japan) (1973), 4(4),  
366-71  
CODEN: POLJB8; ISSN: 0032-3896  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB A solution containing 0.005 mole dye containing .geq. two active  
H atoms  
(i.e. Direct Yellow-4 [6472-91-9], Direct Orange-10 [6405-94-3],  
Direct Red-28 [573-58-0], Direct Brown-1A [2586-58-5], Direct  
Green-6 [4335-09-5], and Acid Blue-43 [2150-60-9]), 500  
ml H<sub>2</sub>O, and 0.01 mole NaOH was mixed with 0.005 mole sebacoyl  
chloride [111-19-3] in 100 ml CHCl<sub>3</sub> for 30 min and blended with  
100 ml cyclohexane to yield the polymer, which was dried,  
dispersed in H<sub>2</sub>O, dialyzed in cellophane tubing against NaOH, and  
precipitated with CaCl<sub>2</sub>. The polymers **absorbed** visible  
**light** in solution, and the position of  $\lambda_{\max}$  of their  
visible spectra was the same as that of the visible spectra of  
the  
monomer dyes. Changing the solvent shifted the  $\lambda_{\max}$  The  
ir spectra of the polymers was also **discussed**.  
CC 35-3 (Synthetic High Polymers)  
Section cross-reference(s): 40

L34 ANSWER 39 OF 39 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 1965:468317 HCAPLUS  
DOCUMENT NUMBER: 63:68317  
ORIGINAL REFERENCE NO.: 63:12546f-g  
TITLE: Selectively saturable organic dyes used as  
optical switches and optical impulse  
amplifiers  
AUTHOR(S): Roess, D.  
CORPORATE SOURCE: Siemens Halske A.-G., Munich, Germany

SOURCE: Zeitschrift fuer Naturforschung (1965), 20a, 696-700  
CODEN: ZNTFA2; ISSN: 0372-9516

DOCUMENT TYPE: Journal

LANGUAGE: German

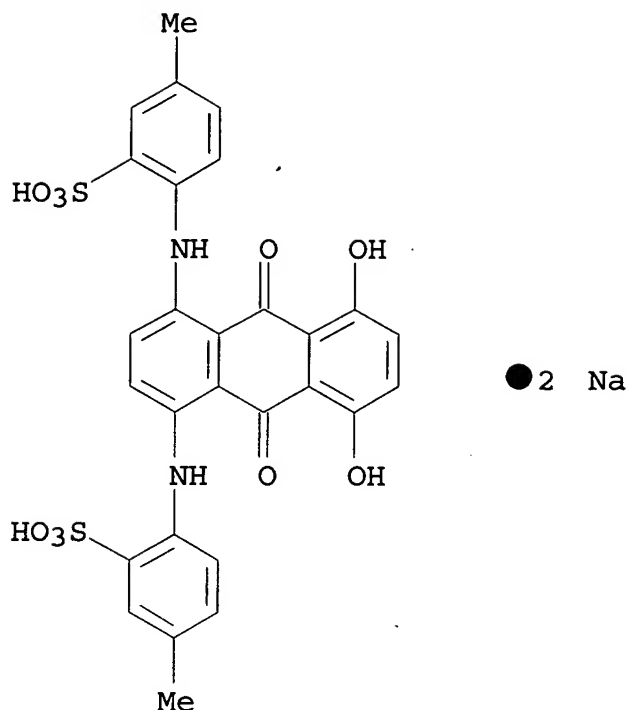
AB The absorption of organic dye solns. can be selectively saturated by monochromatic light in a very small spectral region,  $p/\Delta\nu < 10^{-5}$ , as compared to the line width. A series of new saturable substances is described by the emission frequencies of ruby lasers. The sensitivity of the selectively saturable switches can be increased to the extent that the blocked laser oscillators can be redeemed by a foreign light of small intensity. The uses of such optical impulse amplifiers as quantum counters and a logistic element are **discussed**.

IT 4430-16-4, m-Toluenesulfonic acid, 6,6'-[(5,8-dihydroxy-1,4-anthraquinonylene)diimino]di-, disodium salt  
(**absorption (optical) by, light amplifiers and swtiches in relation to**)

RN 4430-16-4 HCAPLUS

CN Benzenesulfonic acid, 2,2'-[(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)diimino]bis[5-methyl-, disodium salt (9CI)

(CA INDEX NAME)



CC 10 (Spectra and Some Other Optical Properties)

IT Dyes

(absorption of laser light by, optical  
impulse amplifiers and optical switches in relation to)

IT Aniline Blue

C.I. Mordant Black 11

Filter Blue Green

Naphthol Blue

Phenazinium compounds, 3-(diethylamino)-7-[[p-(dimethylamino)phenyl]azo]-5-phenyl-, chloride

(absorption (optical) by, light amplifiers and switches in relation to)

IT 92-31-9, C.I. Basic Blue 17 569-64-2, C.I. Basic Green 4

633-03-4, C.I. Basic Green 1      2381-85-3, C.I. Basic Blue 12

2679-01-8, C.I. Basic Green 5      4197-25-5, C.I. Solvent Black 3

4692-38-0, C.I. Basic Blue 15      19381-50-1, Naphthol Green

28631-66-5, Water Blue      37247-10-2, Azure II      98341-60-7,

3H-Phenoxazine, 7- (diethylamino)-3-imino-8-methyl-, hydrochloride

(absorption (optical) by, light amplifiers and switches in relation to)

IT 4430-16-4, m-Toluenesulfonic acid, 6,6'-[(5,8-dihydroxy-

1,4-anthraquinonylene)diimino]di-, disodium salt

(absorption (optical) by, light

amplifiers and swtiches in relation to)